

The clock and bells

The bells

There are six bells which are fixed to wooden beams, so do not move and cannot be rung by swinging them on their axles. They are chimed manually by one ringer pulling sideways on ropes which hang vertically side by side. The four bells on one beam have two sets of clappers which strike the bells: an outer set operated by wires from the clock and an inner set operated by ropes from the ringing board below. Ropes also operate the two bells on the other beam.



Clappers



The ringing board



Clappers



The separate systems save disengaging the clock for chime peals and the obvious difficulties in re-setting. The driving spindles to the four clock dial faces are operated by the vertical rod through a differential rising from the clock below. The four bells that are also connected electrically to the clock automatically chime the hours and the quarters. The bells are arranged as shown. Number 6 is the largest

3	4	5	6
2			
1	Stairs		

Bell arrangement

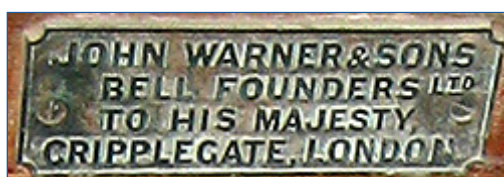
(lowest note) and bells 3 to 6 are used for automatic chiming, with clappers at the back. The front clappers are for manual ringing.

The ringing or chiming board or frame is where the manual ringing is done. There is room for eight ropes, but only six bells were ever installed and only one person rings at a time. The company that made the original bells no longer exists, therefore new matching bells cannot be acquired. The notes span an octave, with the missing notes between 5 and 6. The numbering of the bells corresponds to the order of pitch, the highest bell numbered 1, and the lowest, 6. The highest bell-pull rope is on the right. Bells 1 and 6 are tuned to C. Ringers follow set traditional patterns but new patterns are occasionally developed.

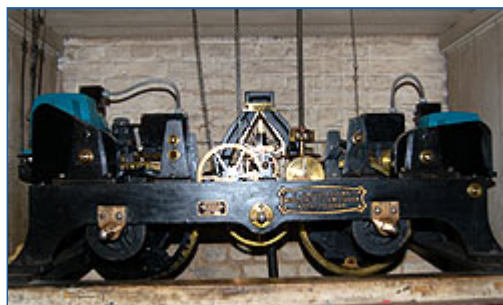
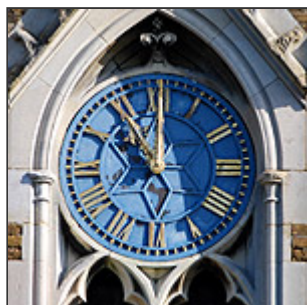


The hole in the floor of the clock level of the tower, through which the bells were originally lifted, can be seen. The chalk tallies are from the ringing in of the New Year. The old year is tolled out before midnight and after midnight, the New Year is tolled in. The rope to the single tolling bell (no. 6) is in the baptistry in the base of the tower. This is used as the service bell, when the whole peal of bells is not being used. This rope used to go down the stairs, through the hole currently used for seeing if the stair-light is on. At the top of the stairs, the pulley still exists.

The bells are inscribed as follows: 1. CORONATION OF KING EDWARD VII JUNE 26th 1902 FEAR GOD HONOUR THE KING (1 Peter 2 v17) 2. JUNE 26th 1902 HONOUR ALL MEN, LOVE THE BROTHERHOOD (1 Peter 2 v17) 3. GLORY TO GOD IN THE HIGHEST (Luke 2 v14) 4. ON EARTH PEACE (Luke 2 v14) 5. GOODWILL TO ALL MEN (Luke 2 v14) 6. ENTER INTO HIS GATES WITH THANKSGIVING AND INTO HIS COURTS WITH PRAISE (Psalms 100 v4)



Bell maker's plaque



The clock

The clock, with four dials, is a simple pendulum wall clock. The rear of the clock faces can be seen at bell level in the tower, one in each wall being connected via the central rod to the clock mechanism below.

The clock has a simple pendulum action, powered by three falling weights. These pull wires over pulleys which unwind three spindles, provided with ratchets, which run down in just over three days. Originally these had to be raised by hand winding every three days using a large crankhandle. Even though the plate says "*steam clock manufacturers*", the clock was hand-wound. The old winding handle is kept in the cupboard under the clock. In 1974 the mechanism was rebuilt with an electric automatic re-winding mechanism, so the clock was then wound by the motor on top of the cabinet (visible from the stairs leading to the belfry).

The clock utilises four of the six bells, the chime consisting of five notes with two notes from bell 6. There are three mechanisms. The quarter chiming (left), the clock (centre), and the hour striking (right). Originally, each had its own weight - all three were larger than the present single one (to the right of the clock cabinet). This raises the weight approximately three times an hour. The pendulum keeps the mechanism turning. The ticking sound of the clock is used for timing the pre-service tolling. A single bell (usually no.5) is rung on every second loud tick - every 23-seconds. The vertical post going up from the clock mechanism controls the clock faces. The mini clock face in the cabinet showing the minutes of the hour is used by the bell ringers to avoid ringing over the automatic chimes. The two motors on either side of the clock mechanism control the automatic ringing; the left motor controls the quarter-hour chimes and the right motor controls the hour striking.