

The bell clappers at All Saints

The heavy clapper hits the ball hard thousands of times an hour.



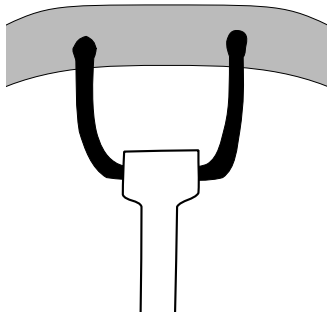
*Worn 1903
wrought iron
clapper*

Clappers

Flats wear on the clapper where it hits the bell. The corresponding pit in the bell can lead to cracking, so bells are $\frac{1}{4}$ turned to present a fresh surface



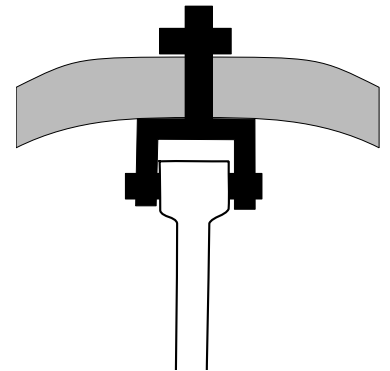
*2005 spheroidal
graphite iron
clapper*



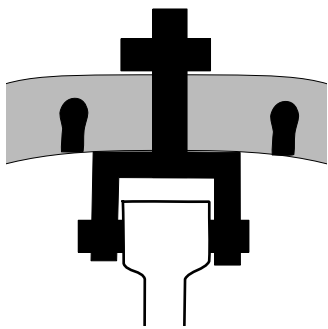
*1704 – Cast in
staple*

Clapper staples

Historically the clapper was suspended from an iron staple cast into the crown of the bell. Modern bells have an independent staple bolted through the crown.



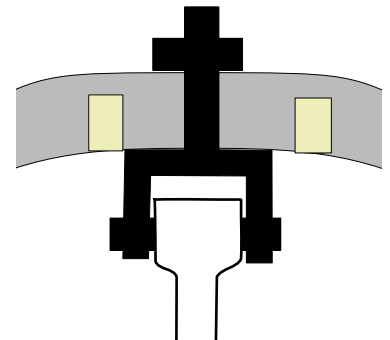
*Modern bolted
staple*



*1903 – iron
stumps in bell*

In 1903 the staples were cut off to fit modern staples, with the stumps in situ. The iron expands as it corrodes and can crack the bell.

In 2004 the stumps were drilled out and filled with resin.



*2004 – Stumps
drilled out*

In 1988 the flight broke off the Tenor clapper. It was mended by inserting a threaded rod and welding. It failed after a year, and two more repairs also failed. The final break in 2002 was not mended, since the clappers were due to be replaced during the 2004 restoration anyway.

