

# Bells and Bell ringing



Photo: Neil Donovan

# Bell ringing in the British Isles in an Ancient Tradition

## *York Minster window 1330*



Photo: The Dean & Chapter, York Minster

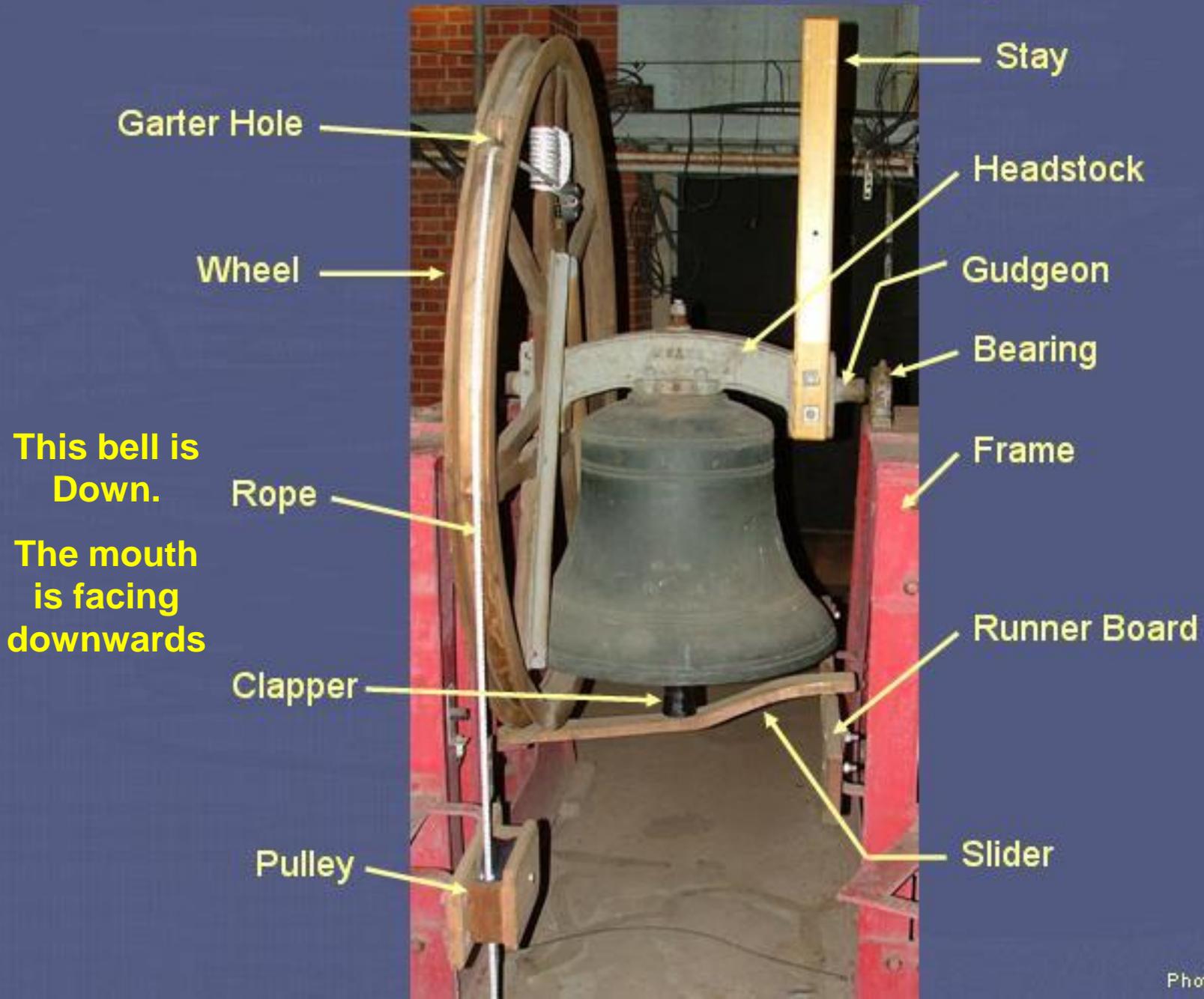
# BELL RINGING

- Why is bell ringing different in Britain?
- When did it all begin?
- What is “Ringing Full Circle”?
- Where in the world can bell ringers ring?
- How many places can you ring at in the U.K.?

# THE DEVELOPMENT OF FULL CIRCLE RINGING.

- **Our System of ringing is unique to the British Isles and its former commonwealth.**
- **Up to the 14th century church bells were hung on simple spindles and chimed by pulling a rope .**
- **1533 Henry VIII divorced Catherine of Aragon and established the Church of England.**
- **The dissolution of the monasteries was authorized in 1536 and bells were destroyed.**
- **After the Reformation bells were re-hung using the latest technology.**
- **The result was that bells were hung on wheels. Thus the speed at which the bell swung could be altered from stroke to stroke.**
- **The addition of stays and sliders allowed the bell to be “set”, thus ringing “full circle” as we do today became possible and the fashion for change ringing began.**

# Bell Hung for Change Ringing



## Handstroke

## Backstroke

These  
bells are  
up and  
ringing  
full  
circle



# Bellringing

WHERE?	WHEN?	WHY?
The British Isles	For services	As a service to the community
Canada	Weddings	
U.S.A.	Funerals	
Australia	On State occasions	<b>For fun.</b>
New Zealand	On practice nights	
Hawaii	On tours	
South Africa	For quarter peals	
	+ peals	

# Casting a bell

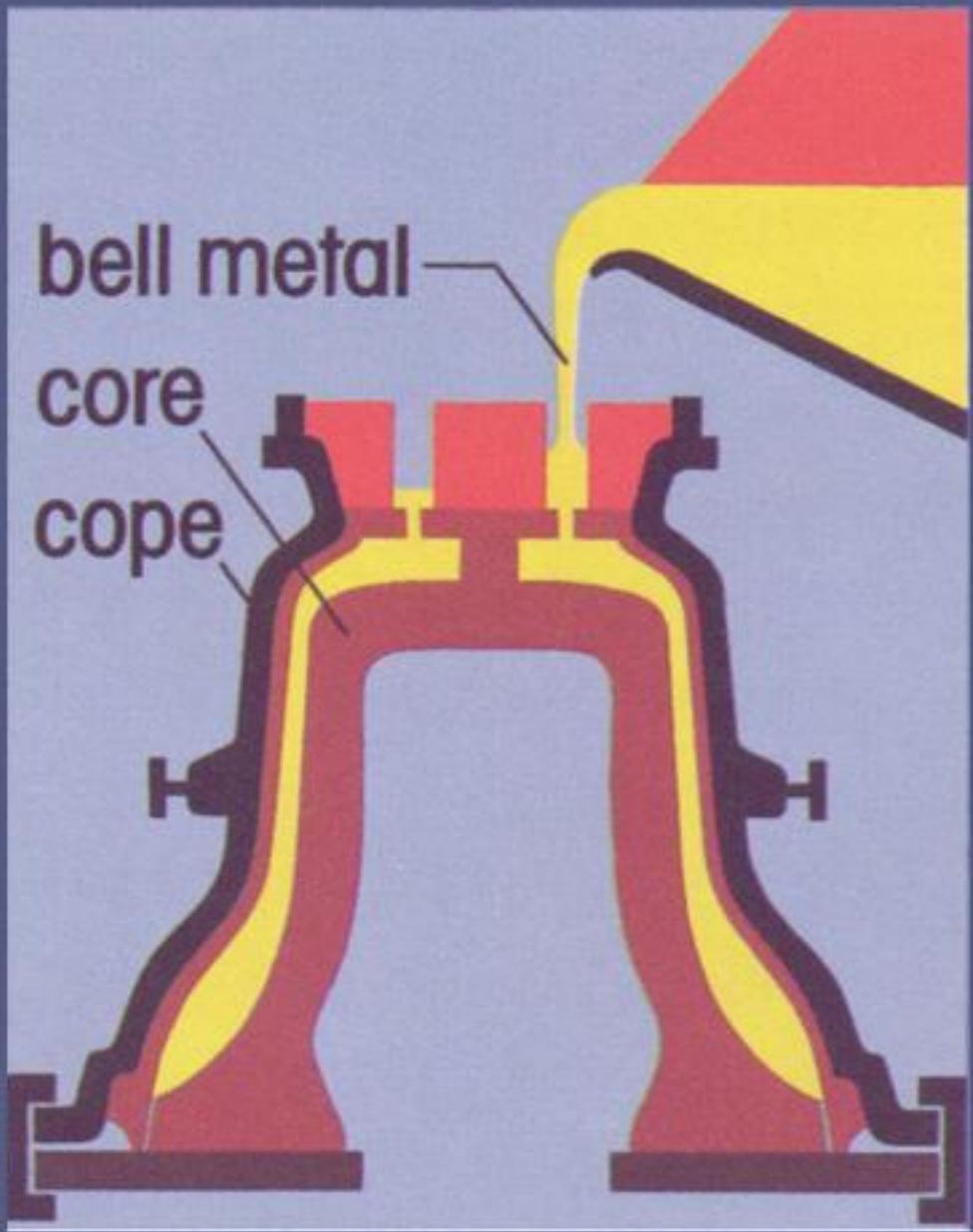


Diagram: The Whitechapel Bell Foundry Ltd.

77% copper 23% tin 1100 degrees



Photo: Taylors, Eayre & Smith Ltd



Photo: The Whitechapel Bell Foundry Ltd.

# Inscribing the bell



Photo: The Whitechapel Bell Foundry Ltd.

# Tuning the bell

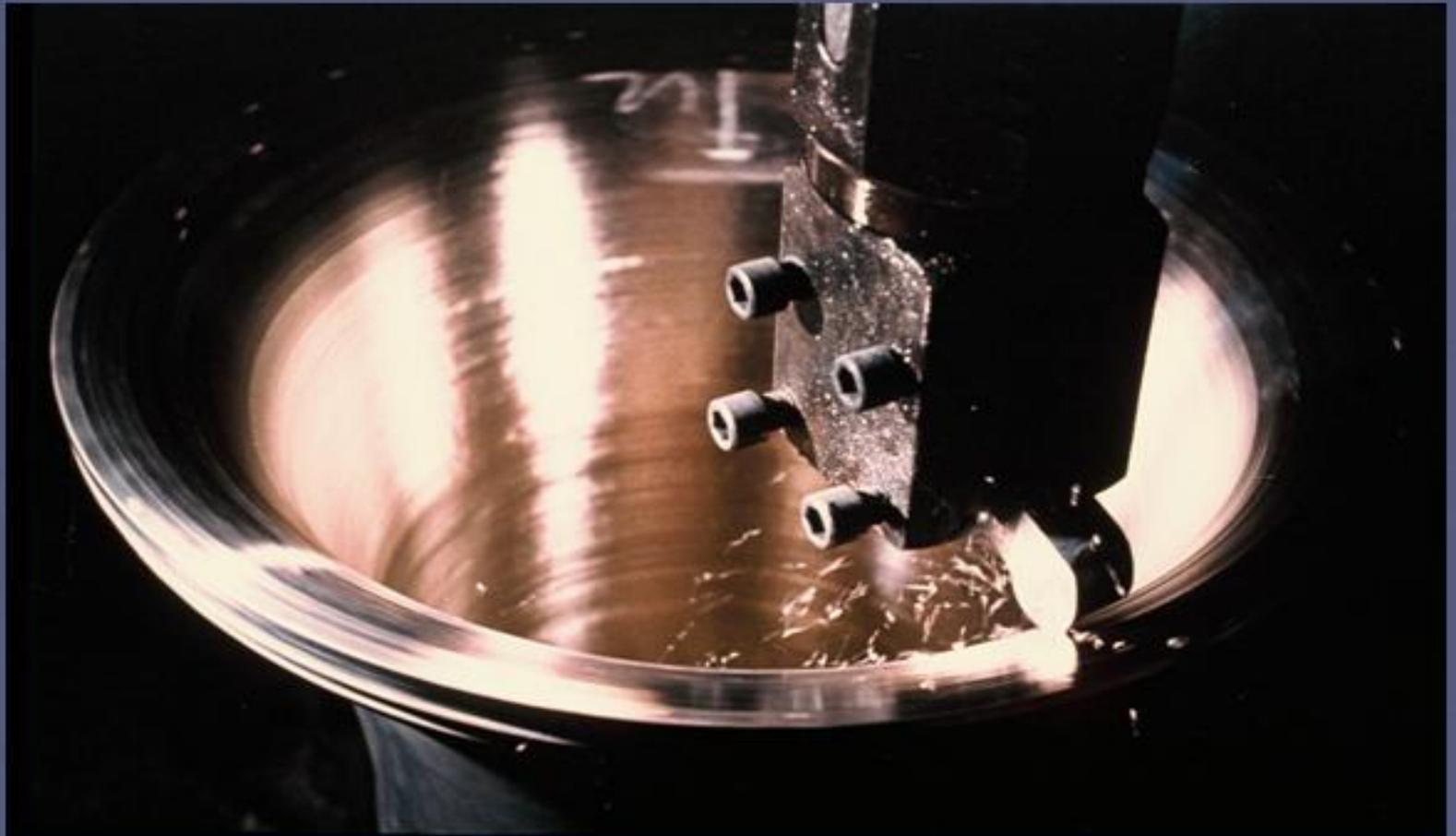


Photo: The Whitechapel Bell Foundry Ltd

# **New ring of 10 for Abingdon**

**Wheels and stays  
added**



# The Swan bells (Perth, Australia) – in the up position



# The development of method ringing

- *Fabian Stedman a Cambridgeshire printer became interested in the mathematics of change ringing. (Campanologia published 1677).*
- *He used this knowledge based on unrepeated permutations to develop “methods”.*
- *As a printer Stedman invented a way of notating methods by use of “the blue line” which is still in use today.*

# Permutations and Blue lines

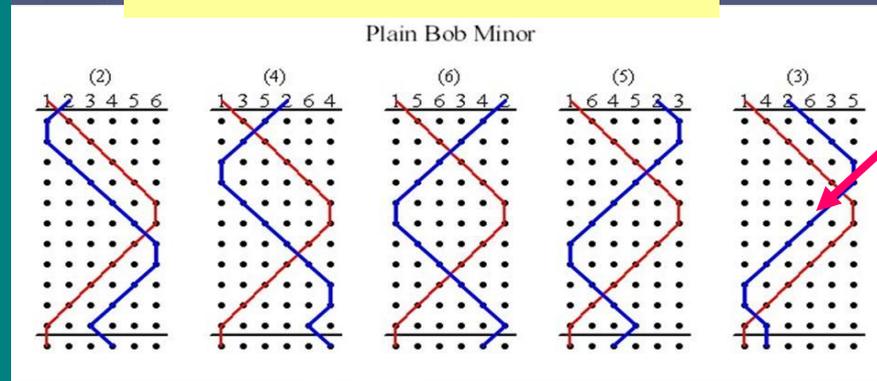
- The number of permutations in a sequence of numbers is defined as the *factorial* of the largest number.
- You obtain the factorial of a number by multiplying it by all the lower numbers; for example factorial  $6=6 \times 5 \times 4 \times 3 \times 2 \times 1=720$  this takes about 20 minutes to ring.

## Name of the method

**Plain Bob**  
**Minor**

i.e. **6** bells

**The blue line**



# Time taken to ring permutations

No. of Bells	Stage	No. of Changes	Time Taken to Ring
3	<i>Singles</i>	6	a few seconds
4	<i>Minimus</i>	24	1 minute approx.
5	<i>Doubles</i>	120	4 minutes
6	<i>Minor</i>	720	25 minutes
7	<i>Triples</i>	5,040	3 hours
8	<i>Major</i>	40,320	24 hours
9	<i>Caters</i>	362,880	9 days
10	<i>Royal</i>	3,628,800	90 days
11	<i>Cinques</i>	39,916,800	2.75 years
12	<i>Maximus</i>	479,001,600	27 years

# DID YOU KNOW?

- HOW HEAVY ARE CHURCH BELLS?
- The largest bell is the tenor at Liverpool Cathedral which weighs over 4 tons. Often it takes two to handle it but some very skilled ringers can manage it alone.
- HOW MANY CHURCHES ARE THERE TO RING AT?
- In this country there are over 5,000 ring able towers. Some people have rung at over 3,000 of them.
- HOW ACCURATELY MUST YOU STRIKE YOUR BELL?
- To make the sounds even each bell must be rung within a sixteenth of a second from the one before it!



LIVERPOOL CATHEDRAL TENOR 82 CWT.

# The tenor at Liverpool Cathedral

# A Chequered History : Secular

- 1552(Henry VIII + Threat of invasion by Spain)
  - Bishop Latimer " If all the bells in England were rung at once there would scarcely be a single spot where a bell would not be heard".
- 1586 Ringers of Westminster were paid one shilling each to ring for the beheading of Mary Queen of Scots.
- 1605 (Gun Powder Plot) Ringers paid 10 Shillings for ringing "when the Houses of Parliament should have been blown up".
- 1637-Ancient Society of College Youths, first ringing society established. Still in existence today.
- 1685-1688 (James II) Ringing extremely fashionable with the aristocracy. It became known as "The Exercise".
- 1700's The standard of behaviour in the belfry was appalling. cursing and swearing was common. Many belfries had a barrel of beer "on tap".

# A Chequered History : Religious

- 1832. The Clergy and the ringers did not always get on!
- The ringers at High Wycombe refused to ring for the Bishop of Lincoln because he had voted against the 1st Reform Act in the House of Lords.
- The Vicar of Thurnby in Lincolnshire prosecuted the ringers for "misusing church property". They were imprisoned when they refused to pay their fines. Eventually the fine was paid for them - *by the vicar!* The parishioners had refused to attend his church services.
- 1833 The Oxford Movement.
- John Keeble's Oxford Assizes Sermon unleashed a spiritual force which led to the "Spring Cleaning" of Anglicanism - including the bell ringers.

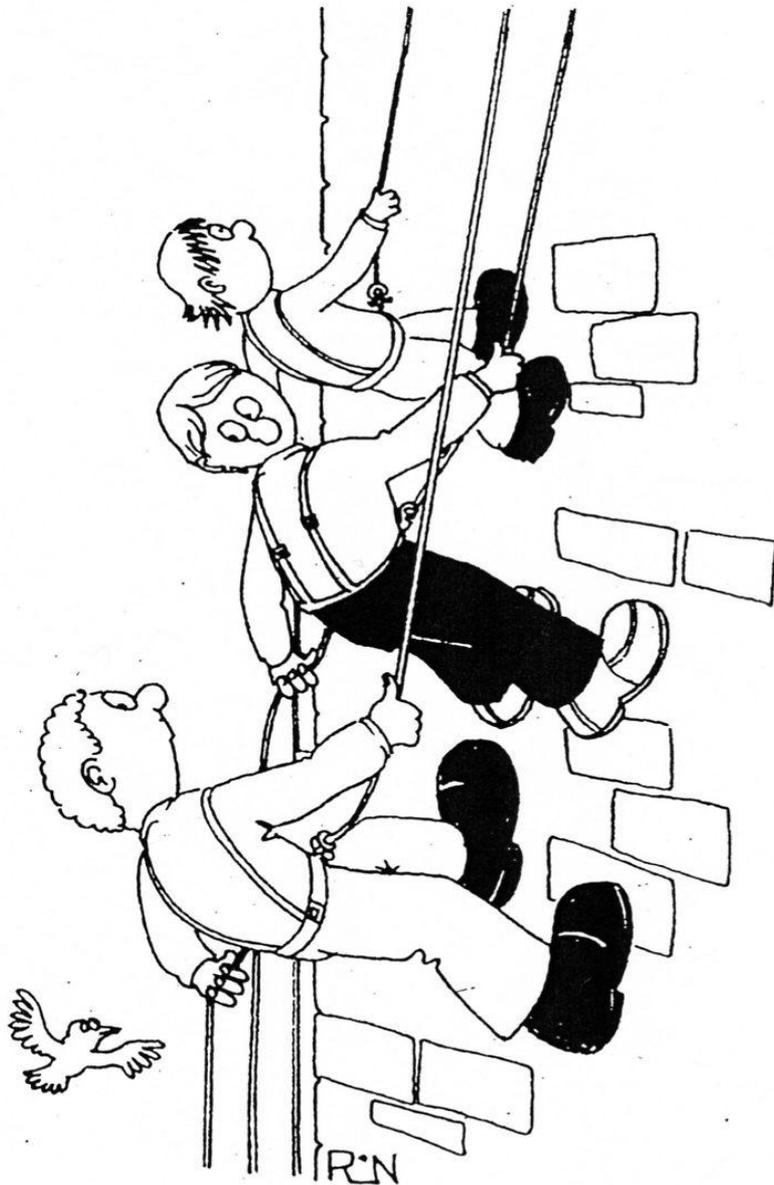
# WHAT ELSE DO WE DO?

- Quiz nights
- Barbecues
- Skittles evenings
- Barn dances
- Treasure hunts
- Outings
- Holidays
- Courses

# WOULD YOU LIKE..... ?

- To meet lots of people?
- To participate in your local community?
- To be part of a team?
- To have a fascinating and challenging hobby?
- To develop a skill?
- To join in an ancient tradition?
- Are you over 10 years of age?
- WHY NOT JOIN YOUR LOCAL BELLRINGERS?

# St Gargoyles



- Do bell ringers stay for the service?
- *Some don't*
- *Others do.*

The bell ringers could not be persuaded to stay for the service

