

THE CLOCK OF ST. PETER'S CHURCH, STOKE FLEMING.



The clock was made by J. W. Benson, Clockmaker of Ludgate Hill, London. It was given to the church by Charlotte Clark, widow of Samuel Echalaz Clark of Redlap House, and was inaugurated with a dedication service on 30th October 1878, a little over three weeks after the death of James William Benson on 7th October that year, aged 52.

It is well made, with a Graham escapement and ratchet strike. It strikes the hours on the Tenor bell and 'ting-tang' quarters on the Second and Fourth bells.

The pendulum is 6 ft. 7 ins. long overall, 6 ft. 2 ½ ins. to the bottom of the bob, and has a beat of 1 ⅓ seconds. The pendulum bob weighs approximately 120 lbs.

The clock is driven by three weights, the smallest being the 'going weight' which drives the timekeeping part of the mechanism and the hands. It weighs a little over 1 cwt.

The next heaviest is the 'hour weight' which operates the hammer to strike the hours and weighs just over 2 ¾ cwt.

The heaviest of the three, at nearly 3 ½ cwt., is the 'quarters weight' which operates the two 'ting-tang' hammers every quarter of an hour.

Originally the weights could travel from near the ceiling of the clock chamber to the ground floor at the base of the tower, a fall of some fifty feet or so, which meant that it needed to be wound only once a week. It would have been quite a task winding the weights that far,

especially the two heaviest, and it would probably have taken something like twenty minutes to wind all three, even without stopping for a break. It is likely though that only a relatively young and fit person could expect to manage that.

1879 and a severely shaken clock winder.

An interesting event occurred when the Tower was struck by lightning during a storm on December 30th 1879; the lightning also shattered the pillars of the main gates. The following is quoted from notes by the Rev. R. S. Chalk, taken from the Dartmouth Chronicle:

“A young man named William Grant, apprentice to Mr. Hole, jeweller, of The Quay, Dartmouth, had a most providential escape. It appears that on Tuesday morning he was sent as is usual, to Stoke Fleming to wind up the Church Clock, as is done weekly.

He entered the tower about 11.15, and after lighting a couple of candles, mounted the clock stage, and was in the act of winding when a tremendous flash of lightning struck the building with terrific force. Grant was knocked off the platform, which is about 4 ft. high, to the floor, and for a few seconds was rendered senseless.

The candles were extinguished and the place being in darkness he groped his way down, by a long ladder leading to the belfry and ran across to the Green Dragon for shelter, but how he got down the ladder is a mystery to him.”

Severely shaken he may have been; nevertheless young Mr. Grant was still able to navigate his way through the shattered gate pillars to the Green Dragon. After such an eventful escapade we may wonder if shelter was all he had in mind, or whether a stiff tot of something ‘medicinal’ may also have featured in his plans!

1887.

The next item of note in the life of the clock appears to have been in 1887. A small card, approximately three inches by four, is pinned inside the case with the following written on it:

*“This clock was taken to pieces
cleaned and put thoroughly in
order by Messrs Gillett of Croydon
in September 1887.*

E. S^t. Aubyn

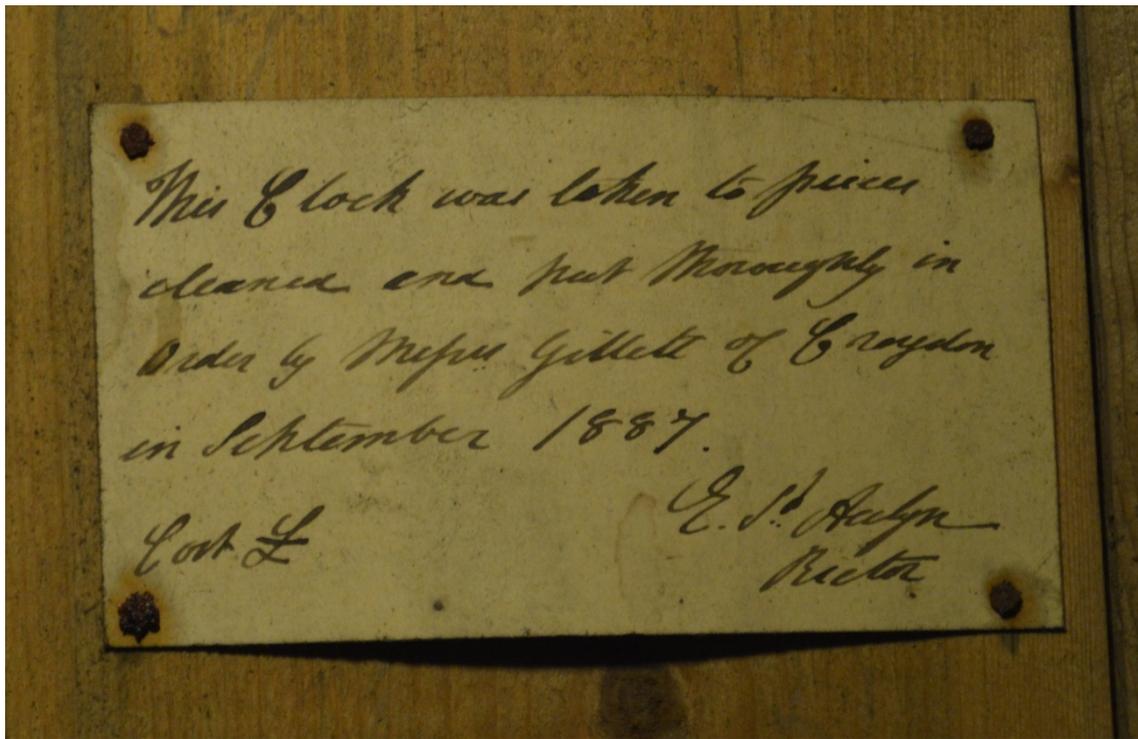
Cost £

Rector.

The signature is that of Revd. Edmund St. Aubyn, Rector from 1873 to 1890. The firm *Gillett of Croydon* is of course the same firm which later became Gillett & Johnston, the Bell Founders who rehung the bells in 1928.

Why the clock should need what seems to have been a major overhaul a mere nine years after it was installed is not recorded. Also unexplained is why the work was carried out by Gillett of Croydon; the firm of J. W. Benson was highly regarded and continued in business under

James Benson's three sons for many more years. It would seem natural, so soon after the clock was installed, to go back to the original makers for maintenance work.



The card from 1887 pinned to the inside of the clock case.

Gilding of the figures.

It may seem strange to those of us who have always been accustomed to seeing the clock face as it is, but the figures were not originally gilded. At some point, probably during the 1890's, the work was carried out through the kindness of Mrs. Buddicom, again of Redlap House, and a great enhancement it was no doubt. It would appear that the clock was considered a worthy cause by the residents of that part of the parish! The figures were re-gilded in July 1973.

In 1913, the then Rector endeavoured to have the clock set "*1 ½ minutes in advance of Greenwich Time at the Post Office,*" although for what purpose we are not told. However it matters little as he was over-ruled by the Vestry, who decreed that it should be set "*Exactly to Greenwich time*" for the future.

In 1915 the current ringing chamber floor was repaired or replaced. As a consequence, the travel of the weights was terminated at that floor. This limited the fall to around twenty five feet and meant that the clock had to be wound twice a week. A full winding now takes about ten minutes.

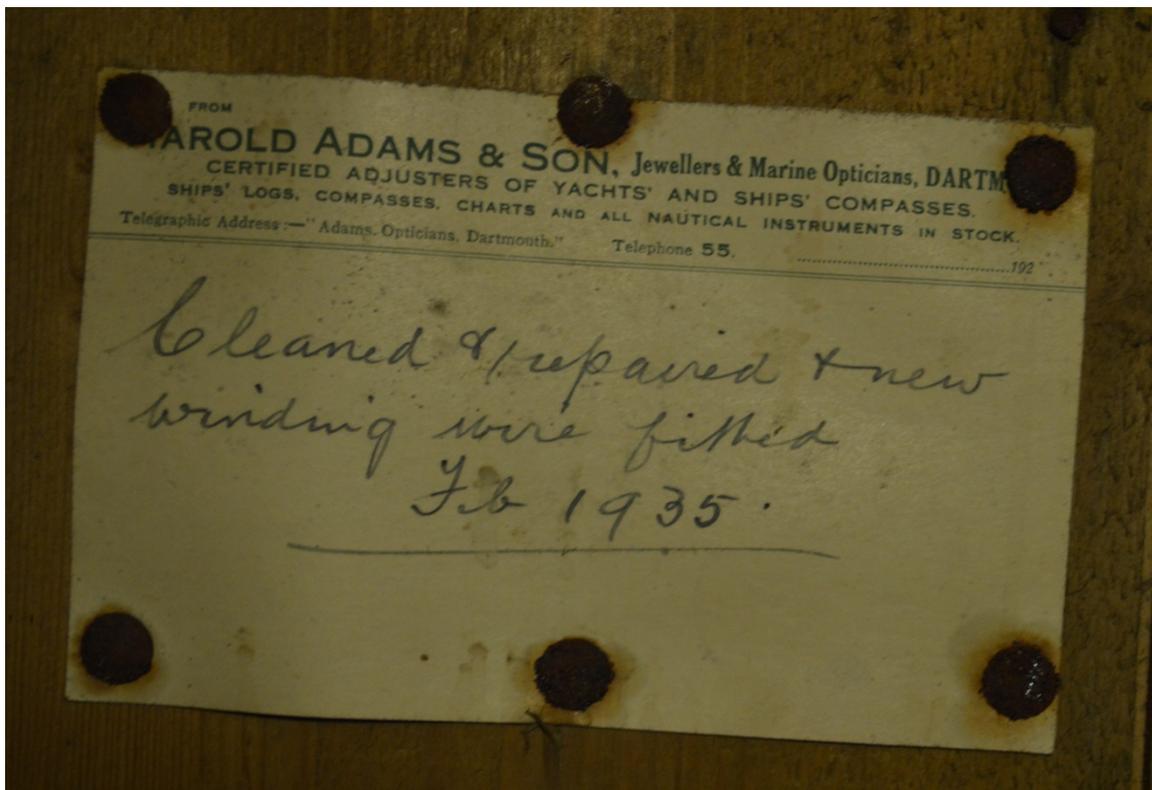
Another twenty years on, and we return again to the Revd. Chalk's notes:

"The clock has not always behaved uniformly, for at a PCC meeting on January 16th 1935, the Rector made the momentous announcement: "As everyone knows the clock has stopped." It was set to rights by Messrs. Adams of Dartmouth, the cost of £14 7/- being met (not without some difficulty) by public subscription.

This is explained by another card, also pinned inside the clock case and headed "Harold Adams & Son, Dartmouth". It reads:

*"Cleaned & repaired & new winding wire fitted.
Feb 1935.*

On the face of it, the comment in the notes is perhaps a little unfair on the clock, considering that the work carried out should have been little more than routine maintenance. The weight lines (winding wires) last quite well but are bound to require periodic replacement. On this occasion it seems, the replacement was not carried out until after the wire had failed.



Card left by Harold Adams & Son after the repair of the winding wire in 1935.

Another part of any pendulum clock which is subject to continual wear is the spring which supports the pendulum. This flexes left to right each time the pendulum swings, in our clock 45 times per minute, 2,700 times per hour, 64,800 times per day, or 23,652,000 times per year. Little wonder then that eventually the spring is likely to split, as did the one in our clock in October 1975, resulting in the pendulum falling to the bottom of the case. The spring was replaced and the clock was going again the following month.

The next twenty seven years passed with little of note. For part of that time the clock was maintained by W. Lloyd Attree, a clockmaker in Dartmouth, and afterwards by Smith of Derby. Apart from routine maintenance and replacement of the wire weight lines, the only other work required was the replacement of a bronze bush on one of the winding gears, and another replacement pendulum spring, (this time before it fractured).

2002

During early 2002 the clock stopped several times over a period of about a month. On Friday 18th February Smith of Derby investigated and found that the main bearings at the clock face had corroded badly as also had the drive shaft to the hands.

On March 18th the hands and drive shafts were removed and taken to the works at Derby. The work involved abseiling down the outside of the tower in very poor weather conditions. The drive shaft was repaired by welding a stainless steel end section onto the old mild steel spindle. It was replaced in the clock and the hands refitted on April 15th.

2007 and 2008

During 2007 the clock again started to give intermittent problems; occasionally stopping for no apparent reason.

Eventually Smith of Derby were asked to investigate and the problem was traced to the dial drive shafts where they pass through the east wall to the dial. At this point the dial drive is converted by gearing into two separate shafts, one for each hand, with one shaft in the form of a tube and the other a rod inside it. Dirt had accumulated inside the tube and was causing the inner shaft to bind against it.

In the autumn of 2007 the dial drive was disconnected from the mechanism to enable the clock to continue to run. This was because it was better for the mechanism to be kept running, and it allowed the clock to continue to strike.

In January 2008 the hands and drive shafts were removed, the shafts cleaned and greased, and everything replaced. Again the work was carried out by abseiling down from the top of the tower.

2013

The weights which drive the clock are suspended from wires which are fixed to a wooden beam in the north-west corner of the tower, and to the floor of the bell chamber above. One end of the wooden beam is embedded in the tower wall and in 1964 it was found to be decayed. The chosen remedy was to support it with a steel girder placed diagonally across the corner.

The steel girder has itself steadily corroded over the years and in early 2013, during investigations into the bell frame, it was found that this girder also had holes through the webbing where it was embedded in the stonework. It was felt that there was a real risk of it

failing, possibly while the clock was being wound, which could have resulted in the weights falling and the clock winder being injured by the wires.

In January the weights were lowered for safety and removed to the windowsill of the ringing chamber, a convenient and firm platform on which to rest them. This action of course resulted in the clock being stopped, which promptly brought a round of enquiries from the villagers.

It would appear that in general the parishioners appreciate their clock! The response to this latest stoppage was a series of donations towards repair, later evolving into a project for the recently formed Friends of St. Peter's, to raise enough funds for a thorough overhaul of the mechanism and conversion to electric auto-winding. The obvious time to carry out this work would be while the bells were being rehung, but meanwhile there was an understandable wish abroad in the village to have the clock going again.

In early June 2013, three of the ringers devised a means of providing a temporary support for the beam carrying the weights, which allowed them to be rehung and the clock was set going once more.

2014.

Looking back over the last 136 years, it is fair to say that our church clock has proved to be a reliable timekeeper and has served the village well. Generally it still keeps time to within one or two minutes per week.

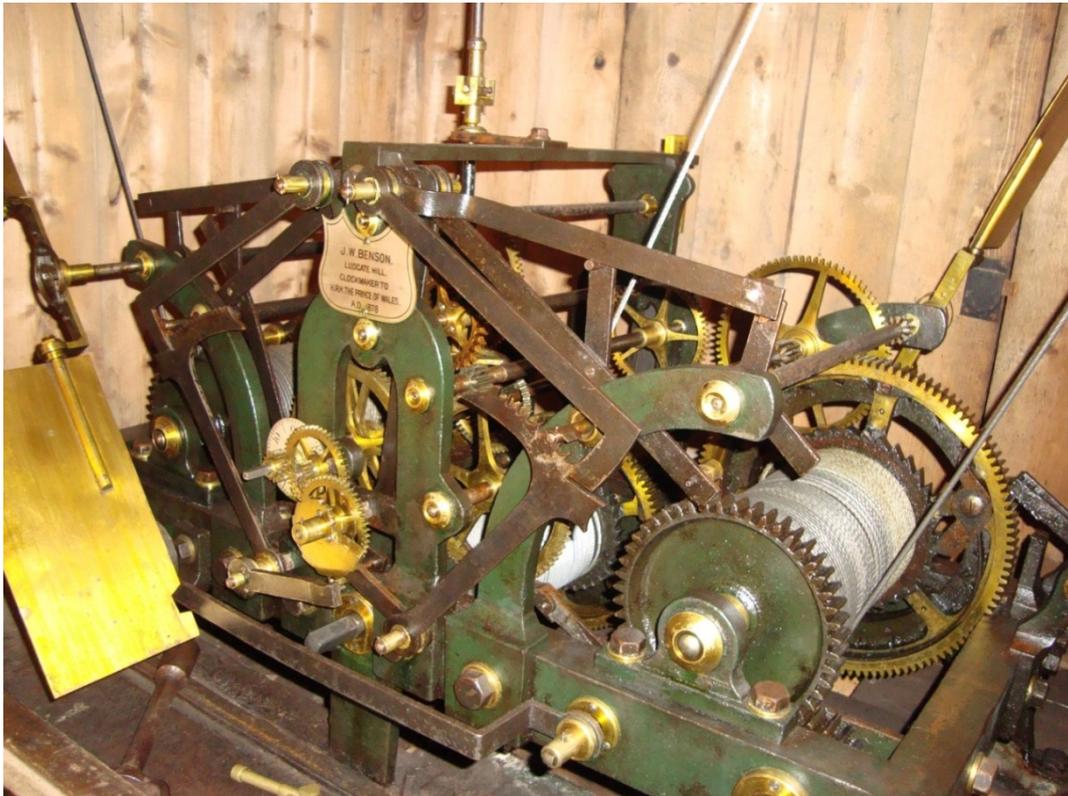
Currently the clock is wound by the Bellringers on Sundays and by Mr. David Norman on Wednesdays. However there are sixty three steps to climb to the clock chamber, and the winding itself is reasonably hard work for the aging volunteers who undertake it. Repairs are needed to the girder which supports the heavy weights, and to the pulleys of the weight lines. It will be necessary also temporarily to remove the clock mechanism in order to clear a path for the removal of the bells.

In view of all this, it is proposed to include in the scheme to rehang the bells the conversion of the clock to electric auto-winding. That will avoid the cost of replacing the corroded girder supporting the weights and repairing the weight line pulleys, and overcome the need to find volunteers in the future to carry out the manual winding.

Modern conversions to auto-winding are carried out in accordance with a code of practise which ensures that the mechanism of the clock is not changed in any way. The additional winding drives are simply clamped to the existing winding drums without any drilling or other alterations to the mechanism, indeed the whole process is designed to be completely reversible. Consequently future generations may still view the high quality engineering of our predecessors in full working order.

John A. Dietz.

July 2014.



The clock mechanism.



The pendulum bob.



Photograph by Nick Teage.

Repairing the clock in 2008.



The girder which was installed in 1964 to support the beam carrying the weights. A hole is clearly visible in one end of it.



The clock weights temporarily supported at clock chamber floor level. January 2013.



Unhanging the weights. January 2013.



The clock weights temporarily stored on the windowsill in the ringing chamber in early 2013.