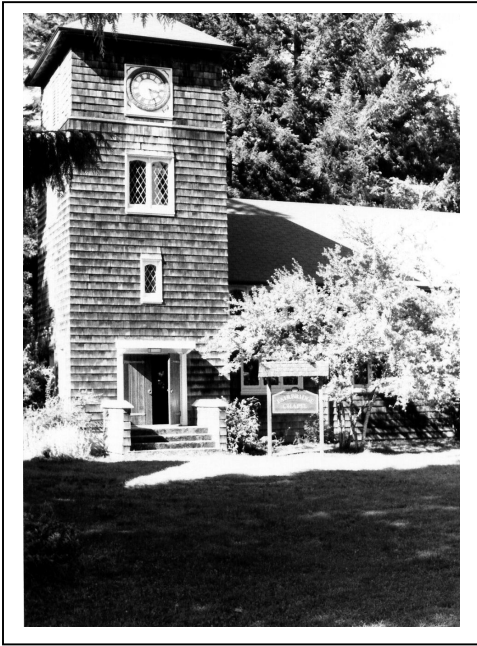


# THE FAIRBRIDGE CHAPEL TURRET CLOCK



The Prince of Wales Fairbridge Farm School, Chapel located at Cowichan Station on Vancouver Island was the first building to receive local and provincial heritage designation within the Cowichan Valley outside a municipality. This was in 1981. The sole purpose was to protect not only the large building and grounds, but also the adjacent one-room Cowichan Public School, built in 1885, and to maintain the numerous significant historic features and artefacts contained within the chapel itself..

Of particular interest is the Fairbridge Chapel Turret (or Tower) Clock. It is believed to be the oldest 'public' clock of its kind in British Columbia, and to our knowledge one of a very few functioning turret clocks in a religious building within the province.

## The Turret Clock Story

The Fairbridge Chapel turret clock, having been made over 130 years ago, is classified as an 'old clock', since it is one of the early or first generation flat-bed clocks. The clock mechanism itself was manufactured by the firm of Gillett & Bland Co. of Croydon and London in 1875 while the bell was cast a year later by the same firm. It was ordered by Charles E. Redfern of Victoria.

Redfern was a clockmaker by trade having apprenticed with his father Charles in London. In June 1862 he set sail aboard the vessel Tynemouth heading for the west coast of Canada---namely Victoria. He initially was hoping to seek fortune in the Cariboo gold fields but upon arriving to Vancouver Island decided to settle here. A year later he established a small jewellery and clock making business and by 1875 had set up business on Victoria's Government Street. Then he purchased what turned out to be a magnificent clock that he mounted above the front door of his business. As Danda Humphreys wrote in the Islander a few years ago; "it was Victoria's first town clock and would remain a wonder for many decades to come. No matter which direction one walked along Government Street, its huge face could clearly be seen and its bell could be clearly heard. In 1884, when Redfern moved to 43 Government Street the clock went too! Some said its hourly chimes carried clear out to Oak Bay." <sup>1</sup> The clock and bell cost £76 sterling and this included the shipping charges. The clock face was illuminated by electric light for the first time on December 6, 1888.

Charles Redfern became Victoria's mayor in 1883 and again from 1897 to 1899. In 1891 Redfern installed another clock atop the new Victoria City Hall. This clock was made by the same firm, now named Gillett & Johnston Co., cost £167 and 10 shillings and operates to this day.

After Redfern's jewellery business, now located at 1013 Government Street, went bankrupt in 1914 the clock and business was acquired by James Rose, another jeweller and it continued to strike the hours for over 60 years in the capital city. Then, in November 1939, Rose donated it to the Prince of Wales Fairbridge Farm School for their new chapel.<sup>2</sup>

1. Times Colonist, Islander Magazine, May 16, 1999

Early pictures of the newly completed chapel taken in April 1940 shows boards covering the clock face opening in the tower so it is not exactly clear when the clock was installed and began operating. However, another picture taken only a few months later shows the chapel grounds well landscaped and the large clock face in the front of the tower. Likely it was installed during that spring of summer. The clock continued to strike the hours until about 1951 when the Fairbridge Farm School was closed. Then the chapel was locked up and except for occasional use by the Duncan Lutheran congregation (until their new church was finished in 1957), was not used again until the early 1970's.

In the first annual report of The Friends of the Prince of Wales Fairbridge Farm Chapel it was reported that in July and August 1971 the chapel was opened and cleaned. The related purpose at that time was to hold a semi-private Eucharist in observation of a family occasion.

This event was held on August 21<sup>st</sup> and "The Offerings of the People collected at the above service were expanded in the dismantling, repair and setting up of the Rose Clock in the tower of the church. The Clock Shop, Victoria attended to this matter and we were appreciative of their kindness inasmuch as the total costs, which were one hundred dollars, when discounted at 15%. When re-mounted in the upper chamber of the tower and re-set it was observed to keep the time very accurately and to strike the hours correctly. It is regularly wound and kept in good operating condition." <sup>3</sup>

Throughout the fall of 1971 and spring of 1972 three organ recitals and choral events took place culminating in the "75 voice Malaspina College Choir, Chorus, Singers and strings, woodwind and brass double octet under extremely able and talented Mr. Bruce More, Head of the Dept. of Music of the College." <sup>4</sup>

Attached to the annual report was one page regarding the winding of the tower clock from August 13<sup>th</sup> to October 16<sup>th</sup>, 1972. It showed that even though the clock was repaired a year earlier and reported to be "wound periodically and serviced as instructed," there were problems with the clock gaining and losing time---up to ten minutes---as they were continually adjusting the pendulum weight and even oiled the clock. The comment on September 10<sup>th</sup> is "oiled last night", then on the line below, "Serious, oil stops clock, won't keep going, phone Clock Shop" and "Richard and I applied naphtha gas to wash 3-in-1 oil off and set it going." <sup>5</sup> They then tried sewing machine oil and seemed to get it going but from then on until the end of the entries the clock continued to stop after a short period of time and kept gaining from five to ten minutes per day. But as they reported, "Considerable satisfaction has resulted from this project and contrary to our anticipation, the hourly ringing of the hours upon the bell has been greeted with interest and pleasure. Where we expected complaints we received compliments." <sup>6</sup>

For approximately the next five years or until the Cowichan Valley Regional District (CVRD) acquired the chapel from the new owners, Bellamy Properties Ltd., the turret clock remained largely silent. In the spring of 1978 attempts were made to set the clock but like in the past it was next to impossible to get the clock to strike on the hour and to maintain the correct time for more than a few hours. On one occasion the locking leave failed to drop into the count wheel slot and the huge weight kept falling at ever increasing speed until it hit the sawdust pile on the tower floor. All the time the hammer kept striking the bell! Then in June 1978 the bell was stolen. The Royal Canadian Mounted Police (RCMP) were called in to investigate and the CVRD was informed that likely the brass bell was long gone, either melted down or possibly even taken out of the who said country and in the hands of some collector. Nevertheless, the Cowichan News printed a story about the missing bell and a few days later the RCMP received a call from an individual that they would find it in a roadside ditch "as long as there were no questions asked". The heavy bell was carefully put back in place and now included the RCMP investigation sticker on its side.

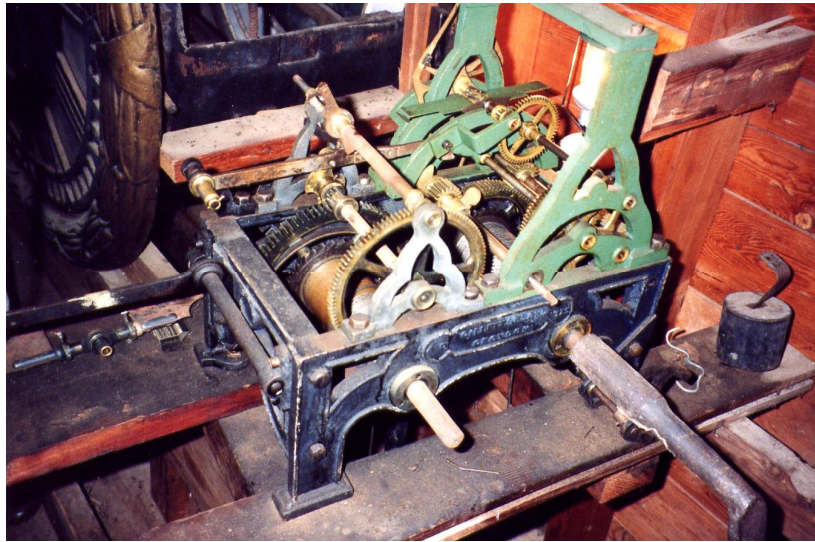
2. Victoria Times, December 2, 1939

3. First Annual Report of The Friends of the Prince of Wales Fairbridge Farm Chapel Preservation Association Cowichan Station (July 1971-August 1971)

4. Ibid

5. Ibid

6. Ibid



Fairbridge Chapel Turret Clock Mechanism Manufactured--1875

For the next ten years, or until 1988, the CVRD maintained the Fairbridge Chapel. During this time seventeen weddings were held as well as other special events. The clock and bell were wound during these occasions but because the time keeping was sporadic at best the bell was often struck by a 'human' jack as the bride and groom emerged from the chapel.

When the Fairbridge Chapel Heritage Society acquired the heritage site and buildings in the fall of 1988 one of the first projects undertaken was to hire Mr. Warrick Whitehead, a Duncan jeweller, to repair the old clock. By the spring of the following year he had completely repaired and cleaned the clock mechanism at a cost of \$650. He also provided the Society with information on how to maintain the clock and suggested that a record be kept of the required windings, any maintenance and other problems encountered from time to time.

Throughout the 1990's the clock only operated during weddings and other special events such as the annual Christmas gathering or on Canada Day since one family complained about the hourly strikes of the bell. However, since the spring of 2001 the clock has been functioning almost continuously and maintained very accurate time. When set to the National Time Signal from Ottawa 10:00am pip, which is done as often as possible, the clock will keep exact time for a period of five days or until the two weights, one for the clock, the other for the bell, have to be wound again by hand.



Bell and Hammer Cast--1876

## The Flat-Bed Clock Mechanism

**A**s mentioned the Fairbridge Chapel turret clock is classified as an old clock being one of the earliest clocks of its kind manufactured. Big Ben, the very first large flat-bed clock began operating in Britain just 16 years before this clock was manufactured and many clockmakers were sceptical that it could accurately maintain time.

Even though Big Ben is much larger than the one in the Fairbridge Chapel the mechanics are very similar. The cast-iron frame of this clock consists of two long girders and two short ones making a rectangle 46 cm x 28 cm. The arbours carrying the barrels and wheels are positioned along the frame and across the narrow width, the bearings being separate pieces bolted to the top of the frame to enable any part to be removed easily without dismantling the frame or any other part of the clock.

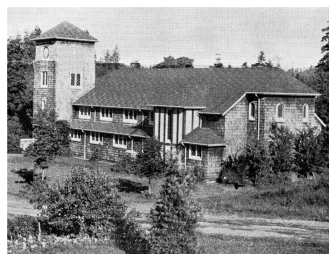
In what are called eight-day clocks, such as this one, the train of wheels consist of four cogwheels. The power tends to move the wheels quickly, thus "running down" the clock. A devise called an escapement, fastened to the pendulum, and connected with the train of wheels, prevents this. Its effect is to change the even motion into little leaps or jerks, thus governing the entire movement. The escapement is adjusted to articulate with the escape wheel, the last of the train, which usually has 30 teeth or cogs. Each full swing of the pendulum in a great clock marks two seconds of time, the beat, and each two revolutions of the escape wheel, one minute. Both the clock and bell weights on the end of metal wire are wound by hand. The Fairbridge Chapel clock will operate a full five days after being wound by hand with a large crank.

There are two separate mechanisms. The striking train gears are for the bell, while the going train gears are for the clock, and also drive the dials. In addition it has its own driving weight to operate the bell hammer or jack, which strikes the bell the appropriate number of times. At every hour, the going train of the clock releases the locking leaver from the count wheel, which allows the hammer to strike the bell. After the correct number of strikes are made the locking leaver falls back into the next slot in the count wheel, also called the locking plate, until it is once again released at the next hour. The count wheel is a circular brass disc with eleven unevenly spaced slots on the outer edge. The hammer will strike the bell 156 blows in a 24-hour period.

## Other Gillett & Bland/Johnston Clocks in Canada

**D**uring the winter of 2004 the old clock seemed to be showing its age and kept stopping so something had to be done. The Turret Clock Group of the Antiquarian Horological Society of England was contacted by e-mail and within 12 hours they replied back suggesting we contact the Gillett & Johnston Co. directly as they were still in business. This was immediately done and in another 12 hours Stephen Coombes of that firm responded telling our Heritage Society what repairs were required. He also sent us a copy of the actual order sheets with specifications for both this clock and the Victoria City Hall clock.

In addition, he also mentioned that their firm had supplied a number of installations, including some "great bells" in carillons, for various public buildings and churches in Canada. Some of the most notable are the Peace Tower clock in the Parliament Buildings in Ottawa, the old Toronto City Hall clock and the clock movement for the steam clock in Gastown, Vancouver. The firm was one of the world's major bell makers during the first half of the last century.



Prepared by:  
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