Mining is a very dangerous occupation and was much more so before the introduction of Health & Safety Legislation. It was a common thing at mines to economise wherever possible by using machinery and haulage ropes for far longer than would be allowed today. In some mines, maintenance merely consisted of an occasional visual check and this is never sufficient to identify worn winding ropes about to break. There were many instances of ropes breaking with fatal consequences and this is what happened at Snailbeach Mine in 1895.

The fatal accident, which cost 7 lives, was caused by the breakage of a steel winding rope at George's Shaft about 6.15am on 6th March 1895. The rope worked in a shaft 252 yards deep and was almost solely used for raising and lowering men. The winding system consisted of two separate cages, each of which had its own rope passing over pulleys on the headgear to the same drum. The ropes were wound on the drum so as to bring one cage to surface at the same time as the other cage was at the shaft bottom. The rope in question wound on a 7ft diameter drum and passed over a pulley on the headgear which was 8ft 8ins in diameter. Both the drum and pulley were too small for a rope of this circumference and they should have been at least 12ft. The weight of a cage and chains was 14cwt and 7 men were allowed to ride at once. The working load of the rope would thus be about 25cwt, exclusive of the rope itself, and this was within the specification.
On the morning of the accident George Williams, the engineman, raised steam and ran the cages 3 times through the shaft as a test. He then raised 2 cage loads of night shift men before lowering the morning shift. It was while the third cage load of 7 men were going down that the rope broke, just after it had passed over the pulley and the cage half way down the shaft. An examination of the broken ends of the rope clearly showed the cause of breakage to be internal corrosion. It was so severely corroded where the breakage occurred that the inside was practically rotten and not fit to carry the weight of the rope alone. There was also considerable internal corrosion in that part of the rope which fell down the shaft but the part remaining on the drum was still in good condition. The engine, drum, pulleys, cages and conductors were all in good working order and there was nothing to suggest that the accident had been caused by anything other than the internal corrosion of the rope. The latter was examined daily by a fitter named Ed. Edwards and his written reports were always that the rope was "all right". At the inquest, he said that no broken wires were visible and this appeared probable since none were seen on the part of the rope left on the drum or on the companion rope, which had been bought at the same time.

It is obvious that the maintenance on the ropes was unsatisfactory by present day standards. It was not known when, or how often, they had been re-capped and there was no regular time or person appointed to grease them. Edwards said that the rope had not been re-capped for 3 years and the 'rope oil' used as a lubricant appeared to form a stiff crust on the surface without penetrating much. Although the shaft was not very wet, the mine water was said to corrode iron. It was apparently the practice of the engineman, when the cages were not in use, to keep them about half way down the shaft. This meant that the same part of the rope was then always on the pulley and it was at this point that it broke. One of the miners giving evidence said that he and others were afraid of the rope but no complaint had been made.

The verdict was "accidental death caused by the breakage of a defective rope" and the jury thought that the rope had not been properly looked after and had been used too long. Although the Mines Inspector felt that the company and their agents should be censured, there was no breach of the Metalliferous Mines Regulation Act as it stood at the time. More recent legislation stipulates that a winding rope must not be used for more than 3½ years and would probably have required it to be galvanized in these conditions. Re-capping is required at intervals not exceeding 6 months and the pieces cut off must be examined for internal corrosion. This job must be done by a person appointed by the manager and the results entered in a special book. At intervals not exceeding 20 days, the wire must be cleaned, checked for broken wires and examined closely at intervals of not more than 300ft or at other places liable to excessive wear. It is therefore unlikely that this accident could have occurred under present legislation and, if it did, the management could be heavily fined or imprisoned.

The Wellington Journal of 1895 includes a report by W Holyoake, a Snailbeach miner

"I went with 7 others down the mine in the second cage. There was no jerk in going down. When we got down we lit our candles and waited till the next party should come down. In
two or three minutes we heard the cage coming down. The noise was like thunder. The cage crashed down with the bodies in it. The cage was smashed up. The rope came down on top of the cage. We signalled up at once and proceeded to take the rope away by drawing it along the level. The rope was knocked about. We had to knock the cage to pieces to get the bodies out. There was no sign of life in any of them. I had every confidence in the rope and it always looked perfectly safe."

The top part of the winding rope recoiled out of the shaft and George Williams the engineman had a narrow escape. Members of the day shift waiting at the shaft bottom were treated to the sight of the 7ft 6ins high cage reduced to a mere 18ins by the smash and yet, when the rescue party descended the ladders to recover the mutilated bodies, it is said that a watch worn by one of the dead was still ticking. After adjustments to the winding engine, the bodies were brought to surface in the second cage.

The Rev. Cope visited the bereaved families after the disaster and his "assurances that the exit of the departed was a glorious change" apparently gave much comfort. He subsequently published a booklet about the disaster which concentrated on three of the victims who were lay preachers. He made much of the spiritual guidance they exerted on their fellow miners and their virtuous lives, they were said to quote from hymns at every opportunity. The funeral procession was of immense length, even though the journey to the graveyard was long and there was deep snow on the ground. Large numbers of poorly clad miners were reported as taking part in the procession.

Like most mines of that period, Snailbeach had its share of dangers but the general standard of shaft maintenance seems to have left a lot to be desired. The daywork book of 1862 has several references to "boiling composition and tarring wire ropes for winding engine" - not a very effective remedy for preventing corrosion and wear! There was also another rope breakage in 1897 but this time the cage was fortunately empty. On this occasion, the 400 yard rope consisted of two lengths spliced together with couplings. One length, only 2 years old, broke close to the coupling and dropped the cage 40 yards.

There were other non-fatal accidents at the mine. These were recorded in reports of the HM Inspector of Mines for the North Wales & Isle of Man District (No.9) and the following incidents are just for the year 1890.
14\textsuperscript{th} Jan – tributer Samuel Rowson (37)
He was with the timberman and agent examining an old disused winze when a rotten platform gave way and he fell 6 yards with the ladder on which he was standing and sprained his ankle. He was off work 19 weeks.

21\textsuperscript{st} Jan – tributer William Nicholas (29)
Two holes bored in rock full of cavities were charged with gunpowder and fired. Both went off, but one made only a small report. While working with a crowbar on the ground loosened by the blast there was a sudden flash, and Nicholas had his arm and face burnt. Some gunpowder must have lodged in one of the cavities and escaped being fired. He was off work 3 weeks.

11\textsuperscript{th} April – miner Thomas Dorricott (44)
He was carrying rails along a level and let one drop onto his foot. He was off work 1½ weeks.

9\textsuperscript{th} Jun – miners John Bailey (41) and Samuel Evans (71)
A fall had taken place unexpectedly from an arch of ground between the 372 and 402 Yard levels, knocking away part of the bunning or stull. While the men were clearing away the rock that had come down, a stone fell and struck them. Bailey suffered fractured ribs and was off work 8 weeks. Evans was enfeebled by the accident and old age and is unlikely to work again.

5\textsuperscript{th} September – miner Thomas Crowder (58)
While he was drilling a hole in the bottom of a level, a stone fell from the side 6 feet above him and hit him on the back and shoulders. He was off work 3 weeks.

22\textsuperscript{nd} September – miner Jesse Rowson (35)
He was ramming down the first layer of tamping with a copper-tipped stemmer upon a charge of loose powder, when a few grains in a cavity of the side of the hole took fire. He had time to drop down before the charge exploded and simply got some dirt in his eye. He was off work 1 week.