

3F The Tale of the Widow Maker

I'm one of the last lead miners at Snailbeach. The mine finished in 1912. When I was a lad there was tremendous excitement about a new way of mining. The pneumatic drill was the very latest thing in mining technology. Instead of drilling holes for blasting with a drill rod driven by a man with a hammer, this drill is driven by compressed air. The huge compressor house at the surface fills a great tank with compressed air and then this is piped down the mine for use particularly in driving adits and in deepening the mine. The speed, compared with hand drilling is enormous.

This is what the mine manager, Henry Dennis, reported to the shareholders of the Snailbeach mine. *A new report in 1878 demonstrated that mechanical drilling was now economic. A level could be driven at a speed of 18 metres a month at a cost of £9 per metre. Hand drilling would get you just three metres a month and cost £14 per metre. Mechanical drilling is six times as fast and two thirds of the cost per metre of hand drilling. With mechanised drills we could use dynamite instead of gunpowder, as it is six times more powerful, and needs smaller hole.*



Compressed Air Drilling Machine

These new drills have tremendous power. No-one could hold them, so they are wedged in place with jacks. All the miners have to do is keep the pressure on the drill bit. The noise is tremendous: a pneumatic drill in the road makes enough noise, but underground the sound reflects off every surface and it is quite deafening. The drill throws out dust which fills the air and makes the miners cough so that they often have to stop working. But even with all the stoppage, drilling is fast and the cost of exploration is reduced. It helps the mine manager because he can determine what reserves the mine has quite quickly, and plan for the future. Snailbeach mine has been driven down to the 550 yard level, that is over 500 metres down.

Well, Henry Dennis just had to use this modern method. Within three years, by 1881, he had installed all the machinery. It had two vast boilers, and the magnificent compressor house looked like a fair sized chapel.

This type of drilling was only used for about 30 years at Snailbeach, but long before that we knew what this did. The drill was called the 'widow maker'. Big strong men had their health and strength completely destroyed by this, and it took years before the cause could be proved. At first no-one knew what was wrong. They thought it might be the lead. But there had been generations of miners at Snailbeach. Often the fathers and grandfathers of the present miners had lived to a decent age and had remained capable of work. But working with these drills could kill a man in eight years. The problem wasn't just the dust from drilling: using dynamite rather than gunpowder produced finer dust which travelled further and remained in the air for longer.

People hadn't really taken much notice of dust in lead mines. It bothered them in coal mines, because coal dust can catch fire or explode, but nothing like that could happen here. But the dust from these drills was just as deadly. It's a silent killer. There's no explosion. It just chokes men up so they can't breathe. Now we have given the disease a name; 'silicosis' is caused by the inhalation of silica dust. It is well known, and it can be clearly demonstrated that silica dust, once it enters the lung, remains there and destroys the lung tissue.

Perhaps it was a mercy that a few years after mechanical drilling began at Snailbeach, the price of lead fell so much that mining became uneconomic. Work virtually ceased and for a time the mechanical drills lay idle. Only hand working continued. But the source of the problem had not been discovered. It would have to wait until much later, when men returned from South Africa after the Boer War ended in 1901 and it became evident that many who had worked in South African mines were now completely unfit for any kind of work.

In 1905 a law was passed which made it compulsory to use jets of water to keep down the dust when drilling. This was a sensible precaution, but it was unpopular with miners. Most of the drilling is done in an upward direction. This means that we are constantly covered with wet mud from the drilling. So people refused to use water. It would be another generation before miners whose working lives were shortened by dust inhalation would receive any compensation for the damage to their health.

By this time the great days of lead mining were over at Snailbeach. Mechanical drilling would continue to be used for extracting Barytes, but the workforce was much smaller. But the dust was still there, and the widow maker was still killing off the men.