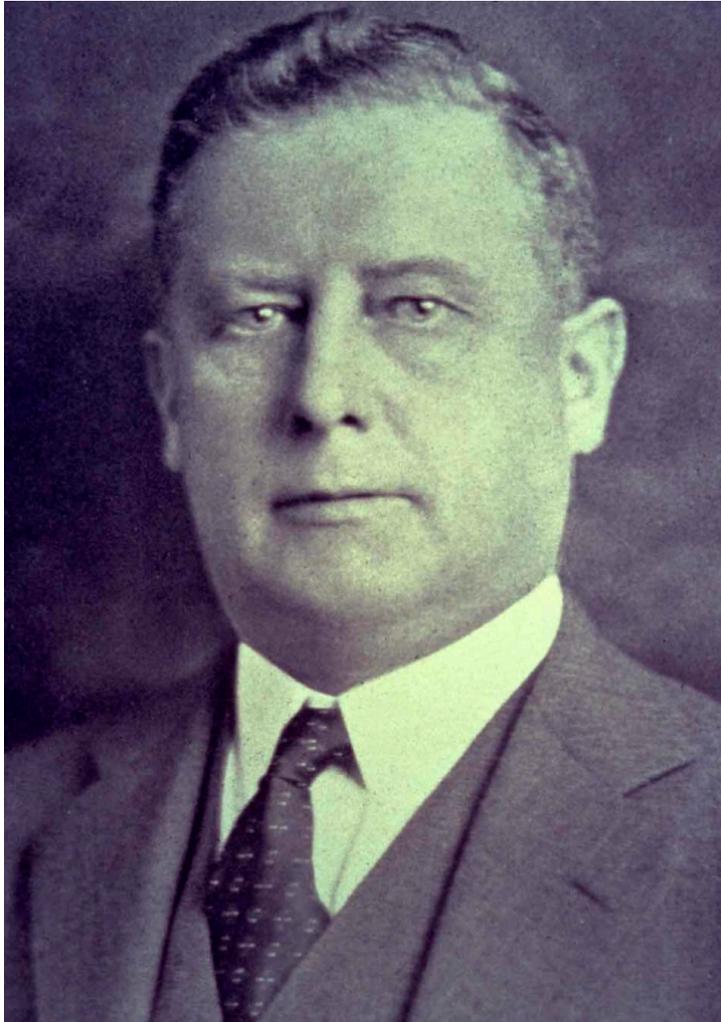


SAFETY John T Ryan Sr and George H Deike Sr

Sponsored by Redpath Mining



John T Ryan

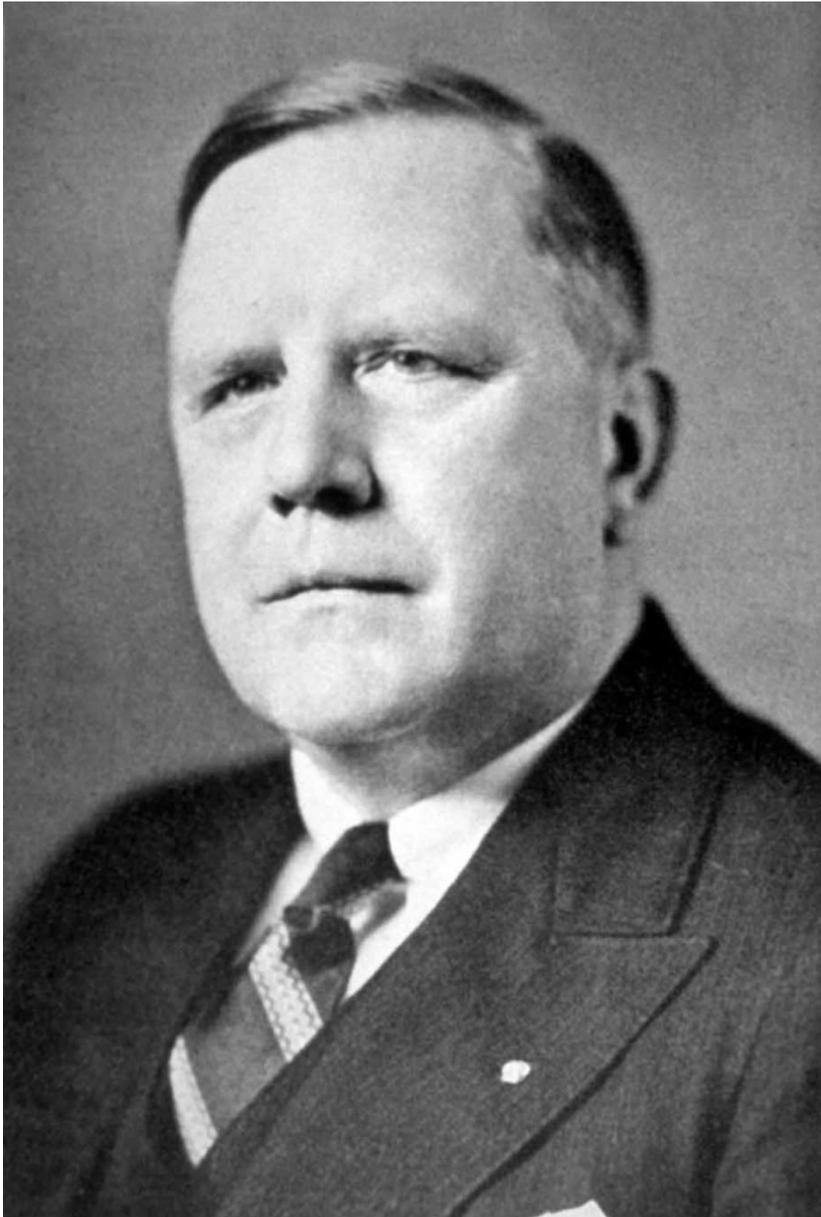
John T Ryan Sr contributed immeasurably to the development of coal mine safety during the first half of the 20th Century. He was instrumental in developing the Edison electric cap lamp, which eliminated the open-flame lamps that caused methane explosions. He was also instrumental in instituting procedures for the use of rock dust in coal mines to prevent dust explosions. In 1914, Ryan and George H Deike Sr, formed the Mine Safety Appliances Company (MSA) in Pittsburgh, which began vigorously to develop methods of avoiding methane and dust explosions in mines. Their company would become the largest mine safety equipment supplier in the world.

It was a horrific mine tragedy that led to the creation of MSA. On the morning of March 26, 1912, the Jed mine in West Virginia exploded. In a flash, methane gas had ignited and more than 80 miners lost their lives. From this tragedy, Ryan had an epiphany: "If I could spend my life doing what I can to lessen the likelihood of the occurrence of such

terrible disasters, I shall feel in the end that my life had been well spent."

Ryan recruited colleague George H Deike to help realise his vision for a new company. Recognising the critical importance of dependable, safe mining equipment, they went straight to one of the country's great thinkers: Thomas Edison. They persuaded him to redesign his electric battery into a package small enough to be worn by miners. They worked closely with Edison to develop the new battery and electric lamp that greatly reduced fatal explosions in coal mines.

The brilliant inventor helped Ryan and Deike create the electric cap lamp which, over the next 25 years, reduced mine explosions by an astounding 75%. Of all his inventions, this was the one that did the most for humanity, Edison would later say in life.



George H Deike

In the decades that have come and gone, MSA has continued to lead the charge for workplace safety. It has led the way with small first-aid kits and portable methane detectors, and harnessed new technologies to produce state-of-the-art thermal imaging cameras, ballistic helmets, and leading edge systems for gas and flame detection.

Ryan, the son of a mine superintendent, was born in Dudley, Pennsylvania, and went to work in the coal mines at age 12, first as a trapper boy and then as a mule driver. He saved up to attend Penn State University, where he received his mining engineering degree in 1908. In 1910, he joined the US Bureau of Mines, where he spent much of his time in mine rescue operations and where he began to formulate a vision of a company whose mission would be to manufacture equipment to prevent mine disasters. He then received an assignment from the

Navy Department to investigate the Matanuska coal fields in Alaska.

On returning from Alaska, Ryan and Bureau colleague, Deike, discovered that they shared similar ideas about products and technology needed to prevent coal mine disasters. Acting on their convictions, they formed MSA. While the two were united in their efforts to improve mine safety and build their company, Ryan's many technological and scientific contributions were unique. These many contributions were recognised nine years after his death by his former colleagues, when they named a new MSA research facility the John T Ryan Sr Memorial Laboratory.

Ryan helped establish effective rock dusting methods to suppress dust explosions in coal mines and promoted these methods as a means of eliminating the explosion hazard. This work was paramount in the wholesale reduction of explosions in US coal mines after 1910.

At the time of his death in 1941, Ryan was President of MSA. His work had contributed greatly to establishing a new era in mining, where miners worked in much greater safety and where their welfare was of primary concern to their employers. The countless lives saved by technology and equipment developed by Ryan are unquestionably his greatest contribution to mankind.



Deike received his degree in mining engineering from Penn State University in 1903. After graduation, he worked for a number of mining engineering firms in central Pennsylvania. In 1910, he joined the fledgling US Bureau of Mines and became active in its mine rescue efforts. In the course of this work, Deike conceived of many developments that could be undertaken to eliminate the multitude of hazards that existed in coal mines at that time. He began to develop his primary professional goal in life – to prevent mine disasters rather than clean up after them.

As President of MSA for most of the time from 1914 to 1953, Deike was a principal influence in guiding the company to world leadership in the manufacture of mine safety equipment. By the time he stepped down as President in 1953, MSA was marketing safety products in nearly every country in the world.

Deike showed a tremendous level of concern for his employees, which resulted in uncommon loyalty. He served on the Board of Trustees of The Pennsylvania State University for 33 years. He received AIME's Erskine Ramsay Gold

Medal Award in 1955. Deike built the company into a position of world leadership.

