## Sir Edward William Elgar; Amateur Chemist-Composer



Edward W. Elgar was born on June 2, 1857 in Broadheath, England. His father, who with his uncle owned a musical instrument shop and played the organ at the local Catholic Church. The tunes that he wrote for a play with his siblings when he was 11 were later published as *Wand of Youth Suites*. Ten years later, he composed *Harmony Music Four* and *Five Intermezzos*. In 1879, he became the conductor of the Worcester Amateur Instrumental

Society and bandmaster to the Attendant's Orchestra at the Worcestershire County Lunatic Asylum in Powick. During the 1880s, he played Popular Concerts in Birmingham, was a soloist at violin recitals for clubs, etc., for pay, and taught violin to young middle-class ladies. In 1889, he married one of his pupils, Caroline Alice Roberts, who played a vital part in the development of his career. One year later, he composed a religious composition, *The Dream of* Gerontius, Opus 38, based on the poem by Cardinal Newman, a Catholic theologian, *The Dream of Gerontius*, popularly called just *Gerontius*. It relates the journey of a pious man's soul from his deathbed to his judgment before God and his settling into Purgatory. In 1899, he completed the score for *Enigma* Variations that was the work that finally secured his reputation as a composer of national and international, standing. In this piece, fourteen people and one dog are featured. The first two *Pomp and Circumstance Marches* were composed in 1901 and the last (fifth) in 1929. About the first march, he appreciated its worth and is quoted as saying: "I've got a tune that will knock 'em - knock 'em flat! ... a tune like that comes once in a lifetime ..." Elgar had 'arrived'.

His interest in science intrigued by new technology of the gramophone led him to be the first major composer to record one of his own works in 1914. He conducted his composition, *Carissima*, in his first recording at the Gramophone Company on the "His Master's Voice" label generally referred to as HMV. The company's London studios were located on an upper floor to minimize the effect of traffic noise and vibrations. The music was played with only a few instruments that could be clustered close enough to the horn.



During the first World War, he wrote patriotic pieces such as *WWI*. He received many honors including being created Knight Commander of the Victorian Order (K.C.V.O) in 1928. After this event, he was known as Sir Edward Elgar

One of his interests was chemistry. At his Hereford house, Plas Gwyn, he was able to set up a small laboratory in the basement. R. J. Buckley, a biographer of Elgar, is quoted as observing in December 1905 that Elgar was "genial, cheery, at peace with

the world' and discovering the joys of chemistry in a laboratory which he had fitted out in the basement."

His manuscript of the Prelude to The Kingdom, dating from January 1906, bears the stains of his chemistry experiments. In August 1908, he moved his laboratory to 'The Ark' that was converted from part of an outhouse. It had a telephone link to the house and was called The Ark because nesting of doves in the shed. Dora Penny, a female friend, observed: "I was taken to see the 'Ark',' as the beautifully fitted-up little laboratory at Plas Gwyn was called. It was rather like a toy Noah's Ark from the outside. I went round reading the names on the bottles … "

A story related by W. H. Reed about Elgar's hobby is:

One day he made a phosphoric concoction which, when dry, would "go off" by spontaneous combustion. The amusement was to smear it on a piece of blotting paper and then wait breathlessly for the catastrophe. One day he made too much paste; and, when his music called him, and he wanted to go back to the house, he clapped the whole of it into a gallipot, covered it up, and dumped it into the water-butt, thinking it would be safe there.

Just as he was getting on famously, writing in horn and trumpet parts, and mapping out wood-wind, a sudden and unexpected crash, as of all the percussion in all the orchestras on earth, shook the room, followed by the "rushing mighty sound" he had already anticipated in *The Kingdom*. The water- butt had blown up: the hoops were rent: the staves flew in all directions; and the liberated water went down the drive in a solid wall.

Silence reigned for a few seconds. Then all the dogs in Herefordshire gave tongue; and all the doors and windows opened. After a moment's thought, Edward lit his pipe and strolled down to the gate, andante tranquillo, as if nothing had happened and the ruined water-butt and the demolished flower-beds were pre-historic features of the landscape. A neighbour, peeping out of his gate, called out, "Did you hear that noise sir: it sounded like an explosion?" "Yes," said Sir Edward, "I heard it: where was it?" The neighbour shook his head; and the incident was closed.

When he moved to London in 1912, he turned to microscopes to satisfy his scientific curiosity.

The alchemists in Alexandria, Egypt, developed "sulphur water" to tint metals. This water was a solution of suphuretted hydrogen or  $H_2S$ , and it was known as "Holy Water" because the ancient Egyptians associated the odor with the odor of sanctity. In 1777, Karl W. Scheele discovered hydrogen sulphide that he called "stinking sulphurous air." R. Kirwan reported on the colored precipitates found from the reaction of hepatic air ( $H_2S$ ) with metals in 1786. Torbern O. Bergman established the foundation of qualitative analysis of inorganic chemicals by dividing the methods into groups. In 1790, Antoine L. Lavoisier in his table on compounds of sulphur, listed sulphuret of hydrogen as an "Unknown Combination". Six years later, Claude L. Berthollet determined the composition of sulphuretted hydrogen (37). Other names for  $H_2S$  were sulfur hydride, sulfane, dihydrogen monosulfide, sulfurated hydrogen, hepatic air, sewer gas and stink damp.

It became the traditional reagent in inorganic qualitative analysis for Group II cations so techniques were sought for easily producing hydrogen sulphide in the past centuries. Elgar was one, although an amateur chemist, who produced a device to

generate this important reagent. As he wrote in a letter to August J. Jaeger, dated November 11, 1908:

"You will perhaps be amused - I hear that the 'new Sulphuretted Hydrogen Machine designed by Sir Edward Elgar' is to be manufactured & called the 'Elgar S.H. Apparatus'!! I will not offer to send you my invention - you would soon tire of it - although a nice toy. "

This toy was "about as small as hand (finger tip to wrist)." There is an inner chamber with a small hole at the top connecting it to the outer vessel. The bottom of the outer vessel is perforated with a series of about 15 small drilled holes." One is kept at Elgar's birthplace and was made by the firm of Philip Harris. His godson, Wulstan Atkins and M. Kennedy have written that it was patented. Atkins stated that it was "in regular use in Herefordshire, Worcestershire and elsewhere for many years".

He died on February 23, 1934. He and his wife had one daughter.

## References:

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