

decided and more illustrious work of a few men within our scope. In its introduction during the latter part of the 18th century, and the first ten years of the present, modern chemistry was applied to no practical purpose, and it cannot be said of the great scientists of that period that they had in view the betterment of mankind, in the sense that we would speak of our chemists and their synthetic work of to-day. Priestley, who was born in the small Hamlet of Fieldhead in the year 1733, "a man so various, that he seemed to be, not one, but all mankind's epitome," published over 100 works, embracing politics, theology, philosophy, chemistry, and other subjects. One of his well-known works is the "Doctrine of Phlogiston Established." His laborious investigations of gaseous bodies earned him the title of the father of pneumatic chemistry—he having devised the well-known pneumatic trough, and with it experimented with fixed air known to us as carbon dioxide or carbonic acid. He observed that the gas conferred "a pleasant acidulous taste on water." Priestley, you see, "suggests the idea of the manufacture of soda water," a beverage says Mr. Huxley, "to naturally and still more to artificially thirsty souls, which those whose parched throats and hot heads are cooled by morning draughts of that beverage, cannot too gratefully acknowledge." He was much absorbed in experimenting with inflammable air as it was then called, but now known as hydrogen, and he says that "phlogiston is the same thing as inflammable air, and is contained in a combined state in metals just as fixed air is contained in chalk and the other calcareous substances, both being equally capable of being expelled again in the form of air." We are indebted to him for nitric oxide, to which he gave the name of nitrous air, and for vitriolic acid air, now called sulphur dioxide. Also fluoride of silicon, nitrous oxide, and last, but not least, for the discovery of dephlogisticated air. It required, however, the eminent French chemist Lavoisier, whose powerful arguments dealt a death

blow to the Phlogiston doctrine to assign the name oxygen to that gas. It is remarkable that at a time when this same Frenchman reigned supreme in the realm of chemistry in his own country, Cavendish, of equal renown, held full sway in England, though they represented two distinct schools. Both were men of great wealth. To the honor of England be it said that though her great countryman lived as a hermit in the pursuit of his immortal work, cold and indifferent as he ever was to the social progress of his fellow people, the close of his long life of 60 years was deeply regretted, and his burial was marked with the utmost respect. But, alas, for our popular and generous Lavoisier, the founder of modern chemistry. At the age of 51, in the days of the "Great Terror," his country led him to the guillotine. A greater martyr or a more illustrious man has not been found. The world became indebted to him as the inventor of the gasometer, and to a great extent for the calorimeter, though in this he received the assistance of his coadjutor, Laplace. His experiments were numerous and marvellous. History will not support the claim of Berthollet, the eminent French chemist, that Lavoisier was the discover of the composition of water. Long and bitter as the water controversy was, there is no doubt in the minds of English historians that Cavendish was the first to prove the non-elemental nature of water. Professor Thorpe says, in 1781 Cavendish discovered that "a mixture of two vols. of inflammable air (the gas now called hydrogen) with one vol. of the dephlogisticated air of Priestley, combined together under the influence of the electric spark to form the same weight of water," and the professor further on nobly remarks "that the honor of our ancestors is in our keeping, and we should be unworthy of our heritage and false to our heart if we were slow to resent or slack to repel any attempt to rob them of that glory which is their just right, and our proud boast." We shall always cherish a warm regard for the Swedish chemist Scheele, a con-