

became the lion of fashionable society, and for thirteen continuous seasons gave lectures on many and most varied subjects, from "laughing gas" to the constituents of artificial manures for agricultural purposes. But most to be remembered is that invention—the miner's safety lamp—the result of a few months' experiment which he had undertaken at the request of those specially interested in coal-mining. Seldom if ever has the sanitary value of a single invention been so quickly appreciated, and its benefits so strikingly illustrated; and yet when asked to patent the discovery, Davy wrote: "I never thought of such a thing, my sole object was to serve the cause of humanity." In addition to the number of splendid workers whom Lavoisier left behind him in Paris, as Laplace, Fourcroy, Guyton de Morveau, Gay-Lussac, Berthollet and Humboldt, England possessed other investigators, who, if not popularizing science, were perhaps adding, even more than Davy, to what has proved of extended permanent value. Of these, was the scholarly physician and conscientious investigator, Dr. Wollaston, who, regardless of money, devoted himself, in 1801, to pure chemistry, and was among the first to begin its application to physiology. He made platinum invaluable and gave us the theory of chemical equivalents, dipped into electricity, and came to be regarded as the greatest master of pure chemistry of his time. He died in 1828. Alongside his work must be placed that of the Quaker schoolmaster, Robert Dalton, since his work was especially in that branch which we now call chemical physics. His chief work was done in that centre of industry, Manchester. He has been called the father of modern meteorology, and did more to establish the laws of gases or elastic liquids than any who had preceded him. He it was who first pointed out that aqueous vapor was mechanically combined in the atmosphere, and that each gas therein is subject wholly to its own laws. His experiments on dew and moisture were wholly new, and he gave us the earliest definition of the "Dew Point." He pointed out that fluids could conduct heat as well as convey it by convection, and demonstrated the important fact of heat being produced by mechanical pressure of air, and cold by its rarefaction. He likewise demonstrated that springs owed their origin directly to rain falling on the surface. He established the law of the expansion of gases, and constructed the hydrometer, and proved that the amount of evaporation in any given time was strictly proportionate to the force or pressure of aqueous vapor at the same temperature. His work in this field of pneumatic chemistry first led him to theorize as to the constitution of matter, and to him we owe the first clear conception of the "Atomic Theory" as we find it to-day, but little modified; and taking hydrogen as unity he determined the weights of many elements and the law of multiple proportions through the constitution of the elements in compound bodies. Questioned and doubted, his