

ACETYLENE, THE NEW ILLUMINANT.

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The value of Acetylene as an illuminating gas is perhaps one of the most important questions amongst the many at present being discussed by those concerned in the lighting of our houses and thoroughfares.

The preparation of Acetylene gas by the action of water on the "carbides" has been known for some fifty years, but probably owing to our ignorance of the valuable properties of this gas, or the difficulty in obtaining it pure and in quantity, Acetylene as an illuminant was practically unnoticed until 1892. In that year, Maquenne prepared it by heating together, at a high temperature, barium carbonate, magnesium and charcoal, the resulting product when treated with water yielding the gas Acetylene. In 1893, Travers obtained Acetylene from calcium carbide, prepared by strongly heating together calcium chloride, charcoal and sodium, in a similar manner to that already referred to. The product, calcium carbide, evolves Acetylene when treated with water. (Proc. Chem. Soc., 1893)

These results, however, while valuable and interesting as scientific records, were of little commercial importance, owing to the expense necessary in obtaining the materials of manufacture.

The possibility of producing Acetylene on a large scale and at a reasonable cost, by the process discovered by Wilson, has within the past year been demonstrated by scientists and experts in both England and America. Mr. T. L. Wilson made his discovery by chance, as is very often the case. While aiming at the attainment of an entirely different object, Mr. Wilson experimenting in his laboratory at Spray, North Carolina, U. S. A. (Jour. Soc. Chem. Industry, Jan. 1895), obtained after one of his fusions, a black, brittle mass, which on being brought into contact with water, rapidly effervesced with evolution of Acetylene. On further investigation, he came to the conclusion that the brittle, black mass was calcium carbide. It had been produced by fusing together finely powdered lime and coke in an electric furnace