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GAS AS A MOTIVE POWER, AND ITS RELATIVE COST.

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Gas was first introduced in the year 1793 by Murdoch, for illuminating purposes, and the first reciprocating gas engine was introduced one year later by Street, and in 1801 a second patent was taken out on a gas engine, setting forth the advantages to be gained by compressing the gas and air before entering the explosion cylinder. These two patents embodied two of the fundamental principles upon the merits of which later engines were made a practical success, although a period of sixty years elapsed from the date of these patents before a practical gas motor was made, and even then the consumption of gas per horse-power was about 100 cubic feet per hour per horse-power, six or seven times what it is to-day. It was not until 1876 that a really successful engine was produced by Otto, and from that date the gas engine has been gradually becoming a more serious competitor of the steam engine, and has within the last few years reached a stage where it has entirely out-distanced the moderate sized steam engine, owing to the high efficiency obtained from recent improvements in the details of construction together with improvements in the apparatus for generating the gas.

Gas.—Any combustible material, when subjected to a high temperature either by its own combustion, or, by the application