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THE FUEL OF THE FUTURE

To the oft presented question of where industry will get power when the coal and oil are gone a novel, if not quite satisfactory, answer is offered by Mr. Edward C. Warren in "The Engineering Magazine" for November. Among the chemical elements which develop heat by combustion is hydrogen, and in that gas Mr. Warren thinks an ideal fuel can be found. It develops four times as much heat as the best coal, and burns so thoroughly that no soot is deposited. Besides, the supply is practically inexhaustible, as hydrogen is one of the constituents of water, and the gas can be recovered and used again promptly. The product of combustion in this case is aqueous vapor, which can be condensed as exhaust steam is and then immediately subjected to the proper treatment for divorce. The process by which carbon, once burned, is again made available takes years.

These statements will hardly be disputed by either the chemist or the engineer, but they do not full, meet the requirements of the fuel problem. The task of dissociating hydrogen from oxygen calls for the expenditure of other materials or of mechanical power. By the methods now in vogue the operation is an expensive one. If the cost of producing hydrogen were ten or twenty or thirty times that of coal, would its adoption be economical? Is there any reason to believe that the process would be any cheaper the second or third time than the first? Except for the convenience of limiting the space demanded for storage, would there be any advantage in using the gas more than once? Is there any resemblance between Mr. Warren's proposition and the hope, once expressed by the late Mr. Tripler, that with one horsepower, generated by steam, he could produce enough liquid air to develop ten horsepower? Perhaps at some future time further light will be thrown on these phases of the subject either by Mr. Warren or his critics. In the mean time it is permissible to remark that if, as he asserts, "power is free," there is a wonderful difference in the cost of harnessing it.

In the course of his discussion of fuels Mr. Warren alludes to the kinds at present utilized as having been "thrust upon us by those who had them to sell." That utterance is hardly such as to commend to favor his plan for a substitute. Consumers of coal and oil have used those articles because nothing better was to be had. Though they may have been dissatisfied at times with the price, as buyers often are, they have had reason to be thankful that fuel of some sort could be had. They were under no compulsion to purchase. Will dealers in hydrogen be dominated by purely altruistic sentiments and put it on the market at less than the cost of production?—New York Tribune.

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