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after the napkins have been removed, which is pumped into the cylinder early in the compression stroke. Previously there was a considerable volume of air at slightly more than atmospheric pressure in the crank case, which enters the intake along with air from the crank case and a few drops of cold water injected under pressure, so that the explosive charge is a mixture of oil, water vapor and air. It is a fact that the steam and water contribute in a marked degree toward the undesirable performance of this type of engine, not only preventing occasional violent explosions due to the irregular ignition, but also materially reducing the quantity of fuel required to develop power at a given rate, so that a greater economy results from feeding a substance like water which hinders rather than aids the combustion (at least while the temperature is rising), is not well understood. It is, however, a matter of considerable interest, for it one may predict from the efforts of gas engine designers today, future developments will probably involve a modification of the usual two-stroke-cycle with explosion at constant volume, in favor of some method by which the rapidity of combustion can be controlled and the maximum pressure lowered. Dilution of the fuel charge with water vapor may be one of the methods provided for diminishing the violence of explosions. In the Metz and Weir engines the air required is generated in a water jacket which forms a sort of cylinder around the expanding cylinder. The cylinder also receives cool water through a sight-feed cock, the quantity being only a very small part of the revolution. A change has just been made in the teaching staff of the Mechanical Engineering Department, where Dr. H. S. Miller, who was instructor in the engineering laboratory, has resigned in the design development of the Fuel Oil engine, a new type of twostroke oil engine about to be manufactured in Providence. His position has been taken by Mr. E. B. Hiller, formerly with the National Blank Book Co., of Holyoke. Mr. Hiller is well known to Institute men, having been at one time instructor in mechanical engineering drawing.

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