

quired to tear apart molecules of water, and to liberate hydrogen and oxygen, is very great indeed, and when hydrogen and oxygen recombine to form water, this energy must reappear, — under ordinary circumstances as heat. This fact, too, is very favorable for the organism, because almost all compounds which contain hydrogen yield a great deal of energy when they are burned; they are, in short, great reservoirs of energy which can be tapped in the process of metabolism. If, therefore, the heat of combustion of hydrogen be nearly or quite a maximum, as it is, among all substances, it is clear that water is again, in another respect, most wonderfully fitted for life.

Finally, if it be true, and such is the case, that very few of the substances which share the fitness of water in one of these characteristics also share or approach its fitness in either of the others, and that none possesses all these qualifications in a degree that merits consideration, it must, I conceive, be admitted that so far as the investigation has proceeded water is the only possible fit substance.

A criticism may here be made; are there not other substances which possess other groups of qualifications which water lacks? And that is a difficulty which is even harder to meet. But in the first place it is evident