



# MODERN CHEMISTRY

## FIRST PART

### THEORETICAL CHEMISTRY

#### CHAPTER I

#### INTRODUCTORY

*Elements—Phlogiston—Discovery of Oxygen—Combining Proportions—Dalton's Laws—Gay-Lussac's Law of Volumes—Avogadro's Hypothesis—Atomic Weights—Molecular Weights—Dulong and Petit's Law—Equivalents—Isomorphism.*

ONE of the earliest questions asked by an intelligent child is: "What is this made of?" "What is that made of?" And the answer is generally more or less satisfactory. For example, if the question relates to butter, the reply may be, "From milk." It may be explained, besides, that when milk is beaten up, or churned, the butter separates, leaving skim-milk behind. But the question has not been answered. The child may ask, "Was the butter in the milk before it was churned? or has it been made out of the milk by the churning?" Possibly the person to whom the question is addressed may know that the milk contained the butter in the state of fine globules, and that the process of churning breaks up the globules, and causes them to stick together. The original question has not really been answered; and indeed it is not an easy one to reply to. Precisely such questions suggested themselves to the people of old, and they led to many speculations.