any theory of the constitution of matter. From the fact that in most cases pairs of elements combine in several proportions (in conformity with the law of multiple proportions) it is plain that for each element there is a choice among several numbers (as 8 and 16 for oxygen), any one of which may be taken as its proportionate number. But a set of these numbers has been found to be related in a uniform way to certain physical properties of the elements and their compounds; for example, to the specific heats of the solid elements, and to the gas densities of compounds. The final section of these numbers is also seen to be independent of theory. It is in fact simply an agreement among chemists to choose from the several numbers available for each element that which conforms with the uniform relations already mentioned. It does not make any difference whether the atomic theory stands or falls—these relations are unaffected. For example, the numbers called atomic weights (the proportionate weights mentioned above) when multiplied by the corresponding specific heats of the elements will give a constant product of about 6.5, whether atoms exist or not; and, moreover, if the theory is shown to be false or insufficient, these numbers can still be used as the basis of chemical formulas and equations.

It is thus, not only unnecessary, but mischievous to introduce the atomic theory into the teaching of chemistry before the experimental meaning of the combining numbers has become quite familiar to the students.

SCHOOLS OF COMMERCE.

By David Hoskins, C.A.

The High School of Commerce, which has just been founded as a part of the Public School system of New York, is greeted as the first of its kind—a free public high school of commerce—in America. We must not, however, regard it as the first in the world. The New York Tribune says that there are many State schools of commerce, as also of industry, in other lands, while the fundamental idea of the institutions is an old one, having existed in this country for many years and in others for generations. Probably the first real school of commerce was the "Aula do Commercio,", founded in Lisbon in 1759. Ten years later the first in Germany was founded by J. G. Busch, and was conducted by him until his death, in 1799. The first in France was organized in Paris in 1820, and it was acquired by the Paris Chamber of Commerce in 1868, and has since that date been known as the High School of Commerce. Switzerland followed the example of Zurich in 1827, Belgium in 1837, and Austria in 1856. In the United States so-called business colleges