

at all; in itself a matter of more than doubtful expediency; the experiments given him should be of the simplest kind only, and of such a nature that even in inexperienced hands, fairly accurate results may be obtained.

The requirement from students of quantitative work, the proper performance of which lies beyond their abilities, is almost inevitably followed by one of two consequences—the conscientious student, failing after repeated attempts to obtain correct results from an experiment, is apt to become discouraged, and begins to dislike his work; his less conscientious fellow, tiring of an experiment after he has repeated it once or twice, “cooks” his figures to give the desired result in order to get rid of it. In either case the harm done is great.

In Part II, “the writer has attempted to give a clear and concise statement of some of the fundamental theories and principles of chemistry; here he has gone more into detail than is customary in books designed for elementary students.”

This part is open to a similar criticism. Some of the matter it contains might be read with advantage by a beginner, but it is not in such form as to be readily available, and the consideration of such subjects as Absolute Temperature, The Determination of Molecular and Atomic Weights, The Determination of Formulas, The Kinetic Theory of Gases, etc., can scarcely be undertaken with profit by beginners in chemistry, and is also rather out of place in a book “principally intended as a laboratory manual.”

On the whole, while with some revision the book would be an excellent one to place in the hands of a second-year student, it is hardly one which can be recommended for the use of beginners.

R. D. C.

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#### NOTES.

*International Chemical Congresses.*—The following circular letter has been addressed to the foreign chemical societies:

DEAR SIR:

An International Congress of Chemists, organized in connection with the World's Columbian Exposition, was held at Chicago in August, 1893. The American Chemical Society met

conjointly with the Congress, and, on account of the interest which was manifested, appointed a Committee of Conference to consider the expediency of holding similar congresses at regularly recurrent intervals of time. The geologists have established a series of International Congresses, which meet triennially; in medicine and pharmacy similar organizations exist; and in each case the success of the meetings has been very great. The undersigned, therefore, representing the American Chemical Society, respectfully request the chemical societies of the world to appoint similar committees of conference, in order to consider whether it is desirable and practicable to organize a series of International Chemical Congresses, in which the chemists of the various nations can regularly meet together for the discussion of questions of common interest. Hoping for a favorable response, we remain, in behalf of the American Chemical Society,

Very respectfully,

(Signed,)

F. W. CLARKE,  
CHARLES E. MUNROE,  
H. CARRINGTON BOLTON,  
EDWARD HART,  
W. O. ATWATER.

Please address reply to F. W. Clarke, U. S. Geological Survey, Washington, D. C., U. S. A.

*Soldering Aluminum.*—Professor Joseph Richards contributes an article on this subject to the first number of the *Aluminum World* from which we learn that the best results have been obtained from an alloy of zinc, tin, aluminum and *phosphorus*. “This solder can be used before the blowpipe or with a soldering iron. In the former case, a little silver can be added to it without making it too hard to melt, and giving it a better color. For use with the copper bolt, this solder leaves little to be desired. The surfaces to be united are first scraped clean, and then tinned with the solder itself by rubbing it on hard with the bolt. The prepared edges are then soldered together with ease, using a hot iron and no flux of any description.”

Pure tin, or an alloy of tin and aluminum will solder, but the joints become brittle. Zinc and cadmium are useless because too brittle. Silver chloride attacks aluminum depositing silver,