

the porcelain crucible is set in a pipe-stem triangle and placed over the full flame of a Bunsen lamp. The top portion of the platinum crucible is heated first and remains hotter than the bottom so that the excess of sulphuric acid boils out from the top of the precipitate, instead of from the bottom. The excess of acid is driven off in about one minute, the platinum crucible is then removed from the porcelain crucible and set over the flame until it is brought to a red heat. This method has been used successfully in over one hundred determinations of calcium.

ALFRED N. CLARK.

NEW BOOKS.

LABORATORY PHYSICS. A Student's Manual for Colleges and Scientific Schools. BY DAYTON CLARENCE MILLER, D.Sc., Professor of Physics in Case School of Applied Science. Ginn and Co. 1903. 403 pp. Price, \$2.15.

This laboratory manual, in the author's words, is meant "to be a student's hand-book for the performance of experimental problems in physics; the grade of work is that of the course in general physics in colleges and technical schools."

In Mechanics, we have general measurements, length, mass, time, acceleration, elasticity and density; under Sound, experimental problems are given in the measurement of the frequency of vibration, the velocity and wave-length of sound, etc.; under Expansion, thermometry and calorimetry. The subject of Heat Energy is considered, while a large part of the work is devoted to Light and Electricity. Under the former, photometry, mirrors and lenses, goniometry, index of refraction, wave-length of light, the interferometer and spectroscope are taken up.

The chapter on Electricity and Magnetism is probably the most important in the whole work. Resistance, current strength, electromotive force, capacity, induction and magnetic quantities are all studied at length.

The above synopsis will give a fair idea of the scope of this work. The book is written with unusual clearness, and the experiments are described in simple and concise language. The work will undoubtedly prove to be valuable to students of physics in the college stage of their work.

HARRY C. JONES.