

Physics and Chemistry

Physical Laboratory Manual. By H. N. Chute.
Boston: D. C. Heath & Co. 80 cents.

Physical Laboratory Manual. By S. E. Coleman.
New York: American Book Co. 60 cents.

Mechanics, Molecular Physics and Heat. A Twelve
Weeks' College Course. By Robert Andrew
Millikan. Boston: Ginn & Co. \$1.50.

Laboratory Physics. By Dayton Clarence Miller.
Boston: Ginn & Co. \$2.00.

Lessons in Physics. By Lothrop D. Higgins. Bos-
ton: Ginn & Co. 90 cents.

Descriptive Chemistry. By Lyman C. Newell. Bos-
ton: D. C. Heath & Co.

Elements of Inorganic Chemistry. By Harry C.
Jones. New York: The Macmillan Co. \$1.25.

Chute's Laboratory Manual has been
known for many years as one of the best

for secondary schools and now appears in a revised edition. The experiments are nearly all quantitative and practicable. It has the very great merit that the teacher will be called upon for help by only the careless and unintelligent in the class, for the directions state clearly what to do, what to use and how to use it. *Coleman's Manual* is very similar to this in scope and character and a choice between them will depend on the laboratory conditions.

Millikan's Mechanics, Molecular Physics and Heat is a college textbook of the highest class in which mathematical theory, definitions, experiments and problems are given together. Antiquated apparatus is not even described, and many new and ingeniously constructed instruments are used by which a greater degree of accuracy can be attained by the student than has previously been thought possible. *Miller's Laboratory Physics* is not so thorough and original as the preceding, but covers the whole subject of physics in one volume devoted exclusively to laboratory directions for college students.

Higgins's Lessons is so old-fashioned in style that we wonder it is not called Natural Philosophy; certainly a book containing no experiments and no problems for the students cannot be said to deal with the same subject as those before mentioned, which are almost exclusively mathematical and experimental. It is written in a primer style and not very accurately. It contains a postscript on chemistry.

Newell's Descriptive Chemistry is a conventional, comprehensive textbook of 550 pages, giving a large amount of information clearly stated and including the usual laboratory course and problems. Personally we should prefer to have most of the historical matter and all of the portraits cut out, and the new dynamic and electrical theories made fundamental instead of appendical, but that is a matter of personal judgment, in which all would not agree. Professor Jones, in his *Elements of Inorganic Chemistry*, professes good intentions in regard to the use of the theories of physical chemistry, but an examination of the book does not indicate that he considers them of much value in elementary instruction. We dislike, too, leaving out

all organic compounds in a textbook which gives the ordinary student all he is to know of chemistry. A little knowledge of carbon compounds is of more practical value than the little knowledge of technological processes, not always up to date, which crowds it out.