

BOOK REVIEWS

Introduction to the Study of Igneous Rocks—By George Irving Finlay, Ph.D., Assistant Professor of Geology, New York University—McGraw-Hill Book Co., N.Y.—Price, \$2.00, net.

The author aims in this book to select from the large body of observed facts bearing on the identification of rocks with the microscope those which it is desirable for the beginner to get command of in the course of his early studies. The work is intended as an introduction to the exhaustive treatises on the subject.

The title is somewhat misleading. The book contains no description of the mode of occurrence of igneous rocks, no discussion of their origin. Such phenomena as differentiation are not even mentioned. There is no discussion of alterations. The book might better have been designated as an introduction to the study of the microscopical characters of rocks and a quantitative classification.

The determination of the igneous rocks in hand specimens—the means actually in use by nearly all those who study rocks in the field, is dismissed in a rather cursory manner. A careful examination with the hand lens should be recommended as the most readily available means of determination of rocks, and the student should study large collections of properly labelled specimens in order to be able to make comparisons before resorting to the use of the microscope. That the author is overanxious to use thin sections for determinations is indicated by such statements in regard to lavas as this: "If we see laucite we conclude safely that the rock should be put with the phonolites, but otherwise we have no good reason for such a determination."

The chapter on movement of light in crystals is similar to that in several other texts already available.

Chapter IV., The identification of the essential minerals of igneous rocks; Chapter V., Description of the Accessory Minerals; and Chapter VI., The Igneous Rock Types, form the most interesting and original portion of the text. The distinctive characters of the rock minerals are well pointed out and helpful. Brief statements of the composition of the common rocks are given.

The last half of the book contains little material not readily available in other works, being largely a synopsis of chapters from Idding's *Igneous Rocks* and the *Quantitative System of Classification* advanced by Messrs. Cross, Iddings, Pirsson and Washington, together with methods of calculating the chemical analyses of rocks.—R. E. H.

General Metallurgy—By H. O. Hofman, E.M. Met. E., Ph.D., Professor of Metallurgy in the Massachusetts Institute of Technology—McGraw-Hill Book Co.—Price, \$6.00, net.

In this work the author has endeavoured to give a general introduction to the study of metallurgy. It is not a treatise on the metallurgy of copper or of iron or of lead; but a discussion of the properties of metals, alloys, metallic compounds, fuels and refractory materials, of metallurgical processes and apparatus of mechanical metallurgical operations and of metallurgical products. It has a place by itself in the literature.

There is no other modern text which covers the same field.

The subject is treated from the standpoint of the metallurgist who has a leaning towards physical chemistry. The theory of solutions developed by physical chemists is applied to the study of the metals and alloys. Elementary statements of the theories are given; but the text is not greatly overloaded with information that the student may already have gathered in his study of general chemistry and physics.

Following the shorter introductory chapters on properties of metals, alloys, metallic compounds and ores is a long chapter—236 pages—on fuels. This contains a very instructive discussion of the properties of fuels and methods of determining them. The numerous types of coals and their uses, the methods of coking and of saving the by-products, liquid fuels, gases, gas production and apparatus for burning the fuels are among the numerous subjects dealt with.

Chapter VII. is devoted to refractory materials. Properties and uses of fire-clay, fire-brick, silica, barite, lime, etc., are described.

Chapters VIII., IX. and X. are devoted to pyrometallurgical, hydrometallurgical and electrometallurgical processes and apparatus. The treatment of these subjects is excellent, as an endeavour is made to elucidate principles rather than to describe special methods.

Chapter XI.—350 pages—is devoted to mechanical metallurgical operations. In view of the existence of Prof. Richards' excellent text book on this subject, there seems to be unnecessary duplication here, though recognition of the fact that mechanical methods are of constantly increasing importance to the metallurgist is obtained by treating ore dressing in the same text rather than in a separate one.

Two short chapters are devoted to metallurgical products and economic considerations.

The volume will prove a very useful one and will doubtless be adopted by many teachers who have been looking for a work which deals with metallurgical principles.—R. E. H.

HEDLEY GOLD.

The Hedley Gold Mining Company, operating the Nickel Plate group of mines, Similkameen district, British Columbia, recently declared its customary quarterly dividend and bonus, together 5 per cent., on the issued capital of the company, which is \$1,200,000. This distribution of \$60,000 makes the total of profits divided in 1913 \$180,000. Last year the final distribution of the year was at the rate of 15 per cent., making a total of 30 per cent. for 1912; for December, 1911, it was 10 per cent., and the total for that year was 25 per cent. The 1913 profits are understood to have thus far been higher than in either 1912 or 1911.

GOLD REPORTED NEAR TELKWA, B.C.

Western papers report a new gold strike at Sibola Creek, a tributary of the Tahtsa River, 100 miles south-east of Telkwa, B.C. No official news is yet available. Telkwa is on the line of the G.T.P., and a rush of men engaged in construction work is regarded as not unlikely.