

on Alpine mineral deposits noted a distinct similarity between the chemical composition of several rocks of the Alps and certain "vein" fillings.

SUMMARY. At Manton, Rhode Island, are to be found greatly metamorphosed igneous and sedimentary rocks. Quartzite is intruded by metamorphosed basic greenstones, and granite intrudes both the quartzite and the greenstones. Lenticular masses of marble and steatite are found in the greenstones. A total of 39 minerals have been identified up to the present time. Of these, 11 minerals may be added to the list compiled in 1926. An interesting occurrence of titanite is mentioned. The titanite crystals occur in veins and lenses of chlorite in the greenstones, and sparingly in chlorite-calcite veins.

### BOOK REVIEW

HANDBOOK OF CHEMICAL MICROSCOPY. ÉMILE MONNIN CHAMOT AND CLYDE WALTER MASON. Volume I. Principles and Use of Microscopes and Accessories; Physical Methods for the Study of Chemical Problems. XIII+474 pages with 162 figures. John Wiley and Sons, New York. 1930. Price \$4.50 net.

Although this edition is based on Chamot's "*Elementary Chemical Microscopy*" it may properly be considered a new book because of the large amount of new material that has been added and the broader scope of the work. It should be of considerable interest to mineralogists and petrographers because of the emphasis placed on petrographic methods as an important aid to the chemist.

In Chapter IX the authors have devoted 64 pages to the theories underlying the use of the petrographic microscope. The treatment of optical theories in this chapter is somewhat novel because of the simplified presentation of the subject matter. This attempt to avoid the rigorous and formal development of optical principles so common to textbooks on petrography may develop a few misconceptions, for example, the production of polarized light by the nicol prism (page 269). If a few photographs of interference figures, or even drawings, had been included in this chapter it would have added considerable clarity to the text especially for those not very familiar with optical methods.

In Chapter XI "Determination of Refractive Indices of Liquids and Solids" the authors recommend that  $\alpha$  and  $\gamma$  be determined upon the particles showing lowest and highest indices of refraction. While for most crystals this method will give representative values, it is always best to check the orientation of these particles, whenever it is possible to do so, by obtaining interference figures from them.

The microscopist in any field will find in this book a handy reference work which discusses the microscope and its accessories in a semi-technical and readily understandable fashion. The petrographer, who is called upon to teach optical methods to chemists, will be especially interested in the list of easily crystallized chemical substances (showing characteristic orientations) tabulated on pages 311-315.

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