

DEVELOPING CRYSTALLIZED MINERAL SPECIMENS¹

WALLACE GOOLD LEVISON

Brooklyn, N. Y.

For many years I have used the method of trimming with a vise described by Mr. J. A. Grenzig in the July, 1918, number of this magazine, but not with a file for a cutter. Mr. Grenzig's piece of file is easy to provide and no doubt an effective cutter, but is likely to fall out of the vise when the rock splits. My cutter, as a result of long experience, is made as follows:

From a bar of tool steel 4 cm. wide by 16 mm. thick saw a piece 6 cm. long. Then from the plate thus obtained saw out a rectangular rabbet leaving the long side 8 mm. thick and the short side 2 cm. wide. Then file the short side to an angle of 60° (the same as a file), or less.

Or, procure a piece of 16 mm. triangular bar tool steel 4 cm. long and a piece of wrought iron bar 16 mm. wide, 8 mm. thick and 6 cm. long. Drill and tap a hole on the center line of one side of the triangular piece half the thickness of the iron bar from its end and insert therein a piece of a screw, leaving 6 mm. projecting. Drill and tap a similar hole in the center of the end of the piece of iron and screw them together at a right angle.

Whether made all of one or of two pieces, the cutter is similar and resembles in form a carpenter's square. In use it hangs on the jaw of the vise by the long side, which may be bent to conform with the shape of the jaw if desired, and which keeps it from falling when the rock splits.

It need not be hardened and if not hardened it may be sharpened by filing, which is rarely necessary. If hardened it should be tempered to a medium bronze or brown yellow. The blacksmith at any quarry will harden and temper it in a few moments. It must then be sharpened by grinding.

The late F. L. Smith and I both used this cutter for trimming small specimens for Rakestraw mounts with a Stevens lever vise very successfully for many years, but a large screw vise is required to afford sufficient power for trimming cabinet specimens.

Another extremely convenient device is a machinists' cold chisel holder. This is a lever hinged to a long arm projecting

¹ Continuation of symposium begun in volume 2; see numbers for August, 1917, p. 101 and July, 1918, p. 152.

normally from the side of a little anvil which is to be held in a vise. In the free end of the lever over the anvil a cold chisel is clamped. The specimen is located on the anvil under the chisel and held with the left hand while the chisel is struck with a hammer held in the right hand. Thus only the waste piece can fall when detached.

BOOK REVIEW

HANDBOOK OF MINERALOGY, BLOWPIPE ANALYSIS AND GEOMETRICAL CRYSTALLOGRAPHY. G. MONTAGUE BUTLER, E. M. John Wiley & Sons, Inc. New York, 1918. 667 pp., 196 figs., 5 tables.

This volume is the combined edition of Professor Butler's three books, bound in the order of their appearance, altho this causes the descriptive part to appear before the parts on blowpipe analysis and crystallography,—a reversal of the usual arrangement. Each part, incidentally, is separately paged, contains its own preface, table of contents and index. Designed for field use, the book is small octavo in size, with a flexible cover, and can be easily carried in the pocket.

In the first part 226 minerals are described in Dana's order. Only the essential characters are given, the distinctive or diagnostic ones being emphasized with bold-faced type. The commercially important minerals are afterwards listed, also the retail prices of gems, and the value of metals and minerals; this part concludes with a glossary and 5 tables giving the properties of the minerals described.

The second part, on blowpipe analysis has been designed for the use of students and prospectors with the idea of making oral instruction unnecessary, and is characterized by simplicity and conciseness. The elementary principles of chemistry are given, however, after the sections on laboratory work.

The last part, Geometrical Crystallography, has been written as an aid in the sight determination of minerals, hence only the essential features of the subject are presented,—the recognition of crystal forms. S. G. G.

NOTES AND NEWS

The British Educational Mission which has been touring the United States during the past few months, included two mineralogists, Sir Henry A. Miers, author of a text-book of Mineralogy and of numerous researches on crystallization phenomena, and Professor John Joly, well known for his geochemical researches, and for recent studies on the significance of pleochroic haloes.

We learn from *Science* that during last summer the Gail Borden collection of minerals, belonging to Occidental College, Los Angeles, has been placed in a favorable position for examination. This collection contains some of the finest mineral specimens on exhibition in southern California, and facilities for their study will be extended to visiting mineralogists.