GEOLOGICAL HAMMERS

Most geological hammers are of a pattern modified from the stone-mason's hammer, made with short square ends, and to be used more for chipping than for breaking. The two hammers sketched were made by ordinary black-smiths, of common drill-steel, and have been found to serve the purpose of breaking rock much more effectively than the orthodox pattern. The smaller one is light enough to be carried all day without any fatigue, and yet it is heavy enough to be constantly used. The larger one is very well adapted for collecting in one locality, the wide chisel edge being especially useful in prying up shale ledges, or in cleaving massive minerals.

One essential feature is the "adze-eye," the widening of the steel at the eye; which adds greatly to the life of the hammer. The pean end should be crowned, so that a clean true blow can be given without danger of sharp edges developing fractures thru the specimen. Hammers should be well tempered, so that they will resist the abrasion of use, yet not be brittle and easily broken.

NOTES ON MINERALS FROM THE BEDFORD, N. Y., WESTCHESTER CO. QUARRY.

SAMUEL C. BROWN, Stamford, Connecticut.

The writer has collected at this quarry the following minerals: Thin tabular specimens of ilmenite, associated with massive manganese garnets and quartz. Columbite, fairly well developed crystals, more brittle and less iridescent than the specimens obtained at Branchvill, Connecticut. Small scales of autunite on uraninite with zircon (massive), found in the North Quarry. The uraninite is not plentiful; also traces of autunite have been found on microcline. Iron Pyrites with a ferruginous coating, small crystals associated with partly disintegrated microcline. Green and blue beryls in large crystals are found, but not of gem quality. It has been reported that a few golden beryls have also been recovered. Black tourmalines are plentiful, but there are very few with perfect terminations; they are found with quartz as a matrix. Rose quartz of fine, deep color, somewhat opalescent is found abundantly. Likewise black massive quartz that is decidedly opaque, in fact, the finest the writer has ever seen. Quartz crystals of peculiar habit in parallel position and with the appearance of formation under pressure, are obtained near the contact of the red microcline with the quartz. Muscovite has been obtained in the South Quarry; thin sections of the sheets show very distinct outlines of magnetite.
NOMINATIONS FOR OFFICERS OF THE MINERALOGICAL SOCIETY FOR 1928.

The unanimous nominations of the Council for officers of The Mineralogical Society of America for 1928 are as follows:
- President, Esper S. Larsen, Harvard University, Cambridge, Massachusetts.
- Vice-President, Lazard Cahn, Colorado Springs, Colorado.
- Secretary, Frank R. Van Horn, Case School of Applied Science, Cleveland, Ohio.
- Editor, Walter F. Hunt, University of Michigan, Ann Arbor, Michigan.
- Councilor, 1928–1931, Ellis Thomson, University of Toronto, Toronto, Canada.

The eighth annual meeting of the Society will be held December 29–31, 1927, at Western Reserve and Case School of Applied Science, Cleveland, Ohio. It is planned to publish in the December issue of the Journal a preliminary list of titles of papers to be presented before the Society at its annual meeting. In order to appear on the advance program, titles of papers should be in the hands of the Secretary by November 10.

Frank R. Van Horn, Secretary.

NEW MINERAL NAMES

**Arrojadite**


**Chemical Properties:** A phosphate of iron, manganese and other bases.

**Formula:** $4R_3'P_4O_{10} - 9R_2'P_2O_7$. Analysis: $P_2O_5$ 34.32, $Fe_2O_3$ 12.39, $FeO$ 19.84, $MnO$ 12.33, $CaO$ 5.69, $MgO$ 1.85, $Na_2O$ 4.67, $K_2O$ 1.45, $Li_2O$ tr., $H_2O$ (110°) 0.44, $H_2O$ (over 110°) 4.96, $SiO_2$ 0.66, $SnO_2$ 1.52; total 100.12. (Sample contained some hematite, quartz, cassiterite and some alteration products along the cleavages).

**Crystallographic Properties:** Monoclinic. Cleavage perfect.

**Physical and Optical Properties:** Color dark green. Pleochroic. $X=\gamma =$ colorless, $Z=\gamma$ = pale green. Biaxial, negative. $2V=71^\circ$. $\gamma = 1.70$. $\gamma - \alpha = 0.007$. $H =$ slightly over 5.

**Occurrence:** Found massive at Serro Branco, Picuhy, Parahyba, Brazil. Believed to be the same as dark green phosphate described by W. P. Headden from South Dakota (Dana p. 758).

W. F. Foshag

**Ianthinite**


**Name:** From the Greek (ianthinos) violet colored.

**Chemical Properties:** Contains water, uranium and iron. Ignition loss (perhaps some gain in oxygen) 15.85. Believed to be $2\text{UO}_2 \cdot 7\text{H}_2\text{O}$. In the second paper the residue after ignition is said to be apparently all uranium.